CONVENTION ISSUE

INFORMATION LETTER

Not for Publication — NATIONAL CANNERS ASSOCIATION — For Members Only

No. 1813 — Washington, D. C. — January 31, 1961

Proceedings of the 54th Annual Convention

N.C.A. Board Appoints Milan Smith as Successor to Carlos Campbell

Milan D. Smith will become Executive Vice President and Secretary of the N.C.A. on September 1, taking over the duties of directing staff activities and programs that have been handled since 1945 by Carlos Campbell, whose retirement is scheduled at that time.

This action was taken by the N.C.A. Board of Directors in their executive session at the Chicago Convention, January 22, and was announced to the membership at the N.C.A. Annual Meeting, the following morning, by John C. Hemingway, President-elect.

Recommendation of Mr. Smith's appointment was made by a Special Committee of active Past Presidents of N.C.A., and the procedures and considerations followed were made known to the membership in a letter from Mr. Hemingway (then Vice President) on October 21, 1960. Following is the text of that letter:

(*please turn to page 12*)

1961 N.C.A. Officers

(*left to right*)

Robert C. Cosgrove, Vice President; John C. Hemingway, President; and Carlos Campbell, Executive Vice President and Secretary

The 54th Annual Convention of the National Canners Association had capacity room attendance at practically every one of its varied sessions, and, as 1960 President Milan D. Smith stated at the Annual Meeting, "the program offered something for every scale of interest from management to the worker at the bench." The breakfast tickets for the several business and technical sessions were sold out. These and the general and special sessions presented something for every taste, interest and need, and offered speaker talent of marked distinction, leaders in their respective subject fields, many of them figures of national reputation.

As one member put it, the wide variety of topics offered and problems covered indicates that a successful Convention can be staged even when no immediate crisis or emergency has to be met.

This issue of the INFORMATION LETTER reproduces the texts or summaries of every available address, and carries a special Table of Contents, along with sectional headings, to make it easy for the reader to find the particular copy he wishes to follow in detail.

In the matter of over-all attendance, the combined Information and Registration Desks of the N.C.A. and its co-sponsor sister organization, the Canning Machinery and Supplies Association, estimate that approximately 7,000 were in Chicago for the conclave including several hundreds that live in the vicinity and were not registered in the hotels.

Besides the two guest speakers—George Romney, president of American Motors Corporation, and Mrs. Rosemary Murphy (Mrs. America of 1961), the Annual Meeting featured election of 1961 officers and Board members and adoption of the Convention Resolutions.

The canners elected their 1960 Vice President, J. C. Hemingway, president of H. C. Hemingway Co., Clyde, N.Y., to be the 1961 President; Robert

C. Cosgrove, a vice president of the Green Giant Company, LeSueur, Minn., as Vice President; and appointed Carlos Campbell to continue as Executive Vice President and Secretary until his retirement September 1, 1961.

President-elect Hemingway also announced at the Annual Meeting the previous day's action of the Board of Directors in approving the recommendation of the Special Committee of active Past Presidents that Milan D. Smith be appointed Executive Vice President and Secretary of N.C.A. and assume Mr. Campbell's responsibilities on his retirement.

Mr. Smith terminated his message of greetings to Convention delegates at the Annual Meeting with a special tribute to Mr. Campbell, who was eulogized also by Chief Counsel H. Thomas Austern at the meeting of the Board of Directors.

1962 Canners Convention

The 1962 Convention of the N.C.A. and C.M.&S.A. will be held January 21-24 with headquarters in the Americana Hotel, Bal Harbour, Fla.

In conducting the Annual Meeting Mr. Smith drew attention to several innovations attributed to the Convention Program Committee headed by Chairman Hemingway. Among these was the presentation of three door prizes at each program session, awarded to holders of lucky ticket numbers. The prizes consisted of $50, $25 and $10 in silver dollars in specially labeled cans. At the close of the session, Past President William U. Hudson, Gerber Products Company, Oakland, Calif., with felicitous remarks, presented Mr. and Mrs. Smith with a silver punch bowl and tray.

Appointment of Milan Smith

(Concluded from page 11)

To the N.C.A. Membership:

The N.C.A. Retirement Program, like many other similar programs, requires that employees retire on reaching age 65. The Program does provide, however, for continued service on a temporary basis, such service, however, subject to mutual agreement between the Board and the employees.

Carlos Campbell, our Executive Secretary, advised the Officers a few months ago that he will be eligible for retirement next year, and that some consideration should be given to the appointment of a man to replace him. President Smith appointed a committee consisting of past presidents of the Association who are currently serving the Association as members of the Finance Committee. This committee of 12 men met with the President and Vice President of the Association, last May at the time of the Spring Board meeting and discussed the problem of replacing Carlos next year. The committee was directed to make its recommendation to the Board. Ed Brown, Chairman of the Committee, submitted the Committee's recommendation in the form of a report to the Officers for transmission to the Board.

The report was submitted to the Board on September 9, 1960, with a request that each Director express his approval or disapproval of the proposal that the committee recommendation be placed on the Board's agenda for action when the Board meets next January. The Board of Directors has acted favorably on this suggestion, and thus the first order of business for the Board at its meeting in Chicago, on January 22nd, will be the consideration of the President's Committee's report.

The Committee, when making its recommendation to the Board, stated that it had considered various potential candidates, both within and outside the N.C.A. staff. After a two-day discussion the Committee unanimously agreed that of the men considered the one who had the greatest promise of fulfilling the position was the man who is currently serving as President of the N.C.A. The Committee had obtained from Milan Smith his consent that he would accept the appointment if the Board of Directors approved the Committee's recommendation and appointed him to the position. Since the Board of Directors has by letters from the individual members, voiced its approval of the Committee's recommendation, it is expected that the Board will devote its discussion next January largely to the problem of details of the arrangement, giving special thought to:

(a) The recommendation that the title of "Executive Secretary" presently used for the Chief Executive Staff Officer of the National Canners Association be changed to one more in keeping with the duties of the position.

(b) To the utilization of Carlos Campbell's fine ability in and knowledge of this industry on a mutually agreeable basis.

You will understand why this letter is being addressed to you by the Vice President rather than the President.

Sincerely,

John C. Hemingway

Milan D. Smith

Milan D. Smith has been an active business executive in the canning industry since 1941, interrupted only by a three-year period of service (1954-57) as Executive Assistant to Secretary of Agriculture Ezra Taft Benson. Mr. Smith, whose late father was a veteran canner, is president of the Smith Canning and Freezing Company, Pendleton, Ore., and of other food packing concerns in Lewiston, Idaho, and Milton-Freewater, Ore.

Born in Clearfield, Utah, in 1919, Mr. Smith received his higher education at University of Utah and George Washington University, in Washington, D. C. Following his marriage in 1941 he took up the operation of his canning and freezing interests, and the agricultural holdings of these firms in Oregon and Washington.

When he began his service as Chief of Staff of the Secretary of Agriculture, Mr. Smith moved his family to Washington. During his USDA career he served concurrently as Special Assistant for Cabinet Coordination and the Committee Management Office.

In addition to his business career, Mr. Smith has been an outstanding leader in church and civic affairs.

As a member of the Church of Jesus Christ of Latter-Day-Saints he served as missionary from 1939 to 1941 and Bishop of the Pendleton, Ore., Ward from 1942 to 1950. He then served as president of the church area in eastern Oregon, and, after moving to Washington, D. C., was appointed president of the Washington Stake which encompasses the greater Washington area, and parts of Maryland and Virginia.

His list of civic activities is impressive: president of the Pendleton Rotary Club, district governor of Rotary International, chosen first citizen of Pendleton for 1950 and first junior citizen of Oregon in 1951, president of County Community Chest, member of the Executive Board of the National Capital Area Council, and member of Regional 11 Executive Committee, and the National Council of the Boy Scouts of America, past president of the Pendleton Chamber of Commerce, and a member of several committees appointed by the Governor of Oregon.

During 1959, besides holding the office of N.C.A. Vice President, Mr. Smith was Chairman of the important Convention Program Committee and served ex-officio on all of the N.C.A. Committees.

ANNUAL MEETING

PRESIDING: MILAN D. SMITH, Smith Canning and Freezing Company, Inc., Pendleton, Ore., 1960 President of N.C.A.

INVOCATION: KENNETH HILDEBRAND, D.D., Minister, Central Church of Chicago

GREETINGS: MR. SMITH, President

ADDRESS: "Creative Cooking with Canned Foods"—MRS. ROSEMARY MURPHY, Kentland, Ind., Mrs. America of 1961

REPORT of the Nominating Committee: EDWARD E. BURNS, Burns-Alton Corporation, Alton, N.Y., Chairman

ELECTION of Officers

REPORT of the Resolutions Committee: A. EDWARD BROWN, Michigan Fruit Canners, Inc., Benton Harbor, Mich., Chairman

ADDRESS: GEORGE ROMNEY, President, American Motors Corporation, Detroit

INSTALLATION of 1961 Officers

Greetings to Convention Delegates

By Milan D. Smith,
1960 President,
National Canners Association

I bid you welcome to the 54th Annual Convention of the National Canners Association. I am delighted to see this broad representation of the membership of the N.C.A. and allied industries. Too, may I say that our Convention holds promise of greater success because of the presence of the distinguished members and guests who have accepted invitations to participate in the various sessions of our conference. Although more will be said later on the subject, I assure you that those responsible for arranging this Convention—the Convention Committee, the officers of the Association and the staff—have not spared any effort to insure its success.

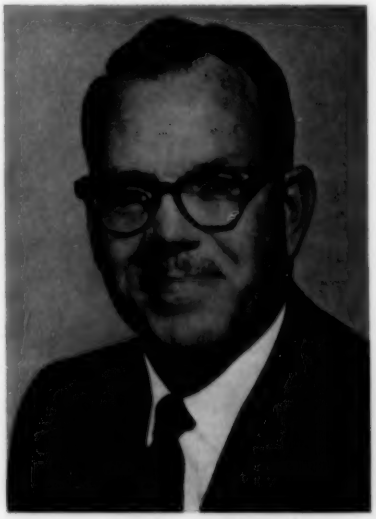
These are challenging times for our industry. The several meetings and events of this day and those to follow through Wednesday have been planned to better equip us to meet and overcome the multitudinous problems with which we must cope. Changes within our industry seem to be accelerating. The role of government in relation to the food field poses new and as yet unanswered questions. A struggle is in prospect to maintain a climate which will permit our industry to continue its steady forward movement. Canned foods have contributed so much to the well-being of the citizenry of this nation and in fact of the free world particularly during this century. The degree of freedom, initiative, and cooperation so characteristic of this and related industries must be preserved in the public interest.

Truly this past year has flown "on wings of lightning." Since you honored me last January in Florida by electing me to serve as President of the N.C.A. during 1960, I have had many rewarding experiences in carrying the responsibilities of the office. It has been a source of joy to me to visit and participate in the various state and regional association conventions. And I have made hundreds of new acquaintances in the great canning fraternity and have renewed friendships with many whom I had previously known.

In several places it was my pleasure to share observations regarding the Soviet food processing industry, which I saw first-hand last June and July as a member of the seven-man United States Food Industry Research Delegation. I returned from that assignment with my faith reaffirmed in the superiority of our competitive, free enterprise system. Particularly was our lead evident in the field of common interest to us.

During the sesquicentennial year of the birth of canning, I have been pleased to explain the Protective Screen Program of the N.C.A. to various associations and groups. This program was designed to help the industry maintain a high degree of public confidence it had earned over many years as a producer of vast quantities of wholesome, nutritious, convenient and economically priced canned foods.

Everywhere I have been I have considered it an honor to represent the National Canners Association as its President. And now, as you have been advised by Jack Hemingway, I have the opportunity for continued service to the Association in another key position. For the many evidences of your good will and support, I am humbly grateful and I extend my heartfelt thanks. When the subject of my serving the Association as its Executive Vice President was broached, my first reaction was that other responsibilities and duties would preclude serious consideration of the offer. Later, given time to reflect and analyze the proposal and after careful thought, I, with the concurrence of my wife and children, made the decision to adjust and arrange my affairs to accept this new and challenging assignment, if in due time the recommendation was approved by the special committee and the Board of Directors, and there was also broad support among the members of the N.C.A. These very words are an indication that approval has been given the recommendation by those in these three important categories. My only desire is to make a lasting contribution to the Association and industry as have the two great leaders who



MILAN D. SMITH
1960 President

who has been appointed by the Board of Directors to be Executive Vice President and Secretary of N.C.A. effective September 1, upon the retirement of Carlos Campbell.

have served as chief executive staff officer of the Association since the N.C.A. was organized in 1907—Frank Gorrell and Carlos Campbell.

It will not be a simple chore to follow in the footsteps of these men. Most of us in this room have profited from the leadership we've had, and I think we should at this time do honor to the high standards under which Carlos has served the N.C.A.—since 1934 when he established our Statistics Division, and as Executive Secretary during the past 15 years. He has served this industry with distinction. He has marshalled the collective intelligence of the membership and wrought it into unity of purpose and action.

By his example and with his high principles Carlos, in his direction of the staff and the program, has provided an ethical and economic setting for the operation of this business of canning. Carlos never issued mandates but resorted always, with personal modesty and self-effacement, to the moving eloquence of a reasoned appeal to the self-interest of the members. Carlos always has been an exemplar of that principle of trade association operation that assumes its members are intelligent men, that they can think about the problems of their businesses and, if the facts out of which these problems arise are placed fairly before them, and if the significance of the facts is evident, a proper line of action will result.

Since the shift of responsibility will take place prior to the next Convention (actually on September 1) it would seem most appropriate at this time for us all to rise and salute with our warmest applause, the performance and the character of Carlos Campbell.

John C. Hemingway Elected 1961 President of N.C.A.; Robert C. Cosgrove Vice President; Directors Named

John C. Hemingway, president of H. C. Hemingway & Co., Clyde, N.Y., was elected 1961 President of the N.C.A. at the Annual Meeting.

Robert C. Cosgrove, a vice president of the Green Giant Company, LeSueur, Minn., was elected Vice President.

Carlos Campbell of Washington, D. C., was continued in office as executive head of the N.C.A., with the title of Executive Vice President and Secretary.

CARLOS CAMPBELL
Executive Vice President
and Secretary

Mr. Hemingway and Mr. Cosgrove were the unanimous choice of the Nominating Committee, of which Edward E. Burns was Chairman.

Mr. Hemingway succeeds Milan D. Smith, president of the Smith Canning and Freezing Company, Pendleton, Ore., who was appointed by the Board of Directors to succeed Mr. Campbell as Executive Vice President and Secretary on September 1, upon Mr. Campbell's retirement.

The N.C.A. membership elected 23 to new three-year terms on the Board of Directors; the terms of 46 members of the Board were held over.

John C. Hemingway

John C. Hemingway is a fourth generation canner, president of a firm that was established in New York State in 1875. The business had operated initially in Baltimore, where the product was oysters, and was set up in New York State in 1875 as H. C. Hemingway & Co., Inc.

Mr. Hemingway has been active full time in the canning business since 1944, following his release from military service. He was sales manager of the family business from 1944 to 1955, when, following the death of his father, Stuart C. Hemingway, he became president and operating head of the company, which cans vegetables. He also is president of the Lyons Canning Company, which operates a plant in North Rose, N. Y., for canning fruits. The business also includes farms for the production of

N.C.A. Board of Directors

At the Annual Meeting the N.C.A. elected 23 to new three-year terms on the Board of Directors. Together with 46 holdover members, following is the Board as now constituted:

DIRECTORS ELECTED FOR A THREE-YEAR TERM

Gerald Black, Black & Gay Canners, Inc., Thomaston, Maine
James Bradley, W. L. Wheatley, Inc., Clayton, Del.
Milton E. Brooding, California Packing Corporation, San Francisco, Calif.
Ralph Day, Ackley Food Processors, Inc., Ackley, Iowa
John T. Hall, Sterling Cooperative, Inc., Sterling, N. Y.
Orlin E. Harter, Harter Packing Co., Yuba City, Calif.
L. Verne Hass, Libby, McNeill & Libby, Honolulu, Hawaii
Grover Howard, Baron Canning Co., Westville, Okla.
J. O'Neill Jenkins, Thomas Foods Corp., Frederick, Md.
R. W. Jensen, Treesweet Products Co., Fort Pierce, Fla.
Emile Lapeyre, Jr., Grand Caillou Packing Co., Inc., Houma, La.
A. H. Mendonca, F. E. Booth Co., Inc., San Francisco, Calif.
P. H. Paulson, Morgan Packing Co., Inc., Austin, Ind.
A. H. Randall, United Growers, Inc., Salem, Ore.
R. A. Rice, The Gypsum Canning Co., Port Clinton, Ohio
J. S. Ross, Grocery Store Products Co., West Chester, Pa.
W. C. Schorer, Jr., Reedsburg Foods Corp., Reedsburg, Wis.
Ambrose E. Stevens, Ocean Spray Cranberries, Inc., Hanson, Mass.
Angus Stevens, Stevens Canning Co., Roy, Utah
F. Y. Tiernan, H. J. Heinz Company, Pittsburgh, Pa.
Floyd E. Williams, Libby, McNeill & Libby, Chicago, Ill.
Robert L. Wilson, Faribault Canning Co., Minneapolis, Minn.
D. B. Wood, Wood Canning Co., Stockton, Calif.

DIRECTORS WHOSE TERMS HELD OVER

Morton Adams, Burns-Alton Corp., Alton, N. Y.
J. P. Arthur, Shenandoah Valley Apple Corp., Winchester, Va.
Charles Bailey, Monmouth Canning Co., Portland, Maine
J. E. Baldwin, Snively Groves, Inc., Winter Haven, Fla.
Luke F. Beckman, The Minster Canning Co., Minster, Ohio
K. S. Benedict, Alexander & Baldwin, Ltd., San Francisco, Calif.
Paul Benson, Green Giant Company, LeSueur, Minn.
Emmett Blackinton, Blackinton & Son Canning Co., Ogden, Utah

canning crops, and has freezing operations.

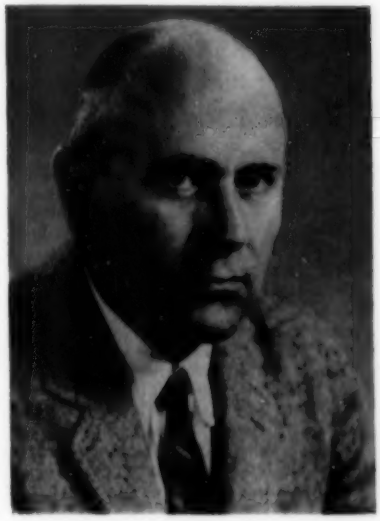
Born in Lyons, N. Y., Mr. Hemingway attended the Salisbury School in Salisbury, Conn., and was graduated from Cornell University with an A.B. degree in 1939. At Cornell he played three seasons on the varsity football team and wrestled heavyweight on the wrestling team. Mrs. Hemingway, Marjorie, also attended Cornell. They have five children.

After graduation he joined IBM in its Electric Accounting Machine Division. He entered the U. S. Marine Corps in 1942 as a boot and was released as a second lieutenant in 1944, when he joined his father in the canning business.

Mr. Hemingway has participated in the affairs of both the N.C.A. and the New York State Canners and Freezers Association, which he served as president in 1952. He has been a member of the N.C.A. Legislative Committee since 1952 and its Chairman since 1955. Also he was a member of the Canner-Grower Relations Committee, 1957-59, and the Home Economics Committee, 1954, and served a term on the N.C.A. Board of Directors, 1954-57.

Mr. Hemingway has been chairman of local community chest and cancer drives and has joined in numerous other civic activities.

ROBERT C. COSGROVE
1961 Vice President



Robert C. Cosgrove

Robert C. Cosgrove joined the executive staff of the Green Giant Company following the end of World War II and, after successive promotions, was made vice president-corporate planning in 1960.

Mr. Cosgrove is the son of E. B. Cosgrove, who is credited with directing much of the development of the Green Giant Company and who was the 1929 President of the N.C.A. Robert worked for the company seasonally while attending school.

Following World War II he went to work with the firm as a shipping clerk and later as production engineering manager. Successive promotions were to assistant director of personnel and public relations, 1949-51; director of personnel and public relations, 1951-52; vice president for personnel and public relations, 1952-55; vice president-marketing, 1955-60; and vice president-corporate planning, 1960.

Mr. Cosgrove attended the University of Virginia and the University of Minnesota. During World War II he was an infantry captain in the European theater, took part in three major engagements, and was awarded the Silver Star for gallantry in action.

He is a past president of the Minnesota Canners and Freezers Association and, like his father, has marked interest in N.C.A. programs. He served as a member of the N.C.A. Board of Directors, 1955-57, and has been active with the Consumer Service and Consumer and Trade Relations Committees.

JOHN C. HEMINGWAY
1961 President

F. Webster Browne, Snow Flake Canning Co., Brunswick, Maine
S. B. Bush, Bush Bros. & Co., Dandridge, Tenn.
William E. Butterfield, Butterfield Foods, Inc., Muncie, Ind.
David L. Dulany, Dulany Foods, Inc., Fruitland, Md.
J. J. Edwards, Besco Products Co., Zebulon, Ga.
A. D. Elabarger, Keystone Cooperative Grape Assn., North East, Pa.
Robert K. Free, Hungerford Packing Co., Inc., Hungerford, Pa.
Charles W. Gardiner, XLNT Food Products, Inc., Los Angeles, Calif.
Max J. Gorby, California Marine Curing & Packing Co., Terminal Island, Calif.
Ira C. Jones, Gem Canning Co., Emmett, Idaho
Earl W. Kale, C. S. Kale Canning Co., Everson, Wash.
Horace E. Kelley, Jr., H. E. Kelley & Co., Inc., New Church, Va.
Glenn E. Knaub, Brooks Foods, Inc., Collinsville, Ill.
Kurt S. Kneiske, Mammoth Spring Canning Co., Sussex, Wis.
Paul Korn, St. Marys Foods, Inc., Delphos, Ohio
Stephens J. Lange, Owatonna Canning Co., Owatonna, Minn.
P. N. Mark, Tri-Valley Packing Assn., San Francisco, Calif.
John McGowan, Columbia River Packers Assn., Inc., Astoria, Ore.
J. T. Menzies, Jr., The Crosse & Blackwell Co., Baltimore, Md.
Lewis H. Moore, L. H. Moore Canning Co., McAllen, Texas
Gary S. Morgan, John C. Morgan Co., Traverse City, Mich.
Alfred A. Morici, Contadina Foods, San Jose, Calif.
O. V. Otteson, Friday Canning Corp., New Richmond, Wis.
Earl A. Randall, North Ogden Canning Co., Ogden, Utah
P. V. Rea, United States Products Corp., Ltd., San Jose, Calif.
Gus Robert, The Cudahy Packing Co., Omaha, Nebr.
P. A. Schmith, Stokely-Van Camp, Inc., Indianapolis, Ind.
James Sclafani, Violet Packing Co., Williamstown, N. J.
George C. Seybolt, Wm. Underwood Co., Watertown, Mass.
John Shafer, Dole Corporation, San Jose, Calif.
Loyal E. Shannon, Otoe Food Products Co., Nebraska City, Nebr.
Farmer Smith, Stayton Canning Co. Cooperative, Stayton, Ore.
Robert E. Snively, The Illinois Canning Co., Hoopeston, Ill.
Edward C. Steele, The Red Wing Co., Inc., Fredonia, N. Y.
S. G. Tarrant, Pacific American Fisheries, Inc., Bellingham, Wash.
M. K. Tescher, Kuner-Empson Co., Brighton, Colo.
Ray B. Wakefield, Gerber Products Company, Fremont, Mich.
Vernon Whitney, Walla Walla Canning Co., Walla Walla, Wash.

Finance Committee

The personnel of the Finance Committee was approved at the Annual Meeting. As announced by President Hemingway, it is as follows:

Norman Sorensen, Country Gardens, Inc., Milwaukee, Wis., *Chairman*
John L. Baxter, Snow Flake Canning Co., Brunswick, Maine
A. Edward Brown, Michigan Fruit Canners, Inc., Benton Harbor, Mich.
Edward E. Burns, Burns-Alton Corporation, Alton, N.Y.
Herbert C. Cornuelle, Dole Corporation, San Jose, Calif.
Howard T. Cumming, Curtice Brothers Co., Rochester, N.Y.
Ralph O. Dulany, Dulany Foods, Inc., Fruitland, Md.
L. E. Felton, Green Giant Company, LeSueur, Minn.
Peter M. Filice, Filice & Perrelli Canning Co., Richmond, Calif.
William A. Free, Sr., Hungerford Packing Co., Inc., Hungerford, Pa.
Robert A. Friend, Friend Brothers, Inc., Melrose, Mass.
Fred C. Heinz, H. J. Heinz Company, Pittsburgh, Pa.
William U. Hudson, Gerber Products Company, Oakland, Calif.
A. L. Koch, Bordo Products Company, Chicago, Ill.
H. F. Krimendahl, Stokely-Van Camp, Inc., Indianapolis, Ind.
D. P. Loker, Star-Kist Foods, Inc., Terminal Island, Calif.
Roy G. Lucks, California Packing Corporation, San Francisco, Calif.
George B. Morrill, Jr., Burnham & Morrill Co., Portland, Maine
Sherman Morse, Jr., Beech-Nut Life Savers, Inc., Canajoharie, N.Y.
Fred M. Moss, Idaho Canning Co., Payette, Idaho
Maxwell N. Naas, Naas Foods, Inc., Portland, Ind.
E. M. Nuckols, Jr., Campbell Soup Company, Camden, N.J.
Louis Ratzesberger, Jr., Dole Corporation, San Jose, Calif.
B. E. Richmond, Richmond-Chase Co., San Jose, Calif.
George C. Seybolt, Wm. Underwood Co., Watertown, Mass.
James M. Shriver, The B. F. Shriver Co., Westminster, Md.
John A. Snively, Snively Groves, Inc., Winter Haven, Fla.
Alfred J. Stokely, Stokely-Van Camp, Inc., Indianapolis, Ind.
Henry P. Taylor, Taylor & Caldwell, Inc., Walkerton, Va.
A. O. Verbeke, Libby, McNeill & Libby, Chicago, Ill.
H. L. Wedertz, Lakeside Packing Co., Manitowoc, Wis.
J. B. Weix, Sr., Oconomowoc Canning Co., Oconomowoc, Wis.

N.C.A. Resolutions Reaffirm Canning Industry Opposition to Interstate Barriers and Compulsory Crop Controls

The N.C.A. membership adopted a resolution reaffirming the canning industry's opposition to state or local laws and requirements which interfere with the interstate distribution of food products that are wholesome and informatively labeled.

The membership also reaffirmed the industry's opposition to regulation of canning crops by federal or state marketing orders or any other compulsory crop controls.

The Convention resolutions were presented at the Annual Meeting by A. Edward Brown, Chairman of the Resolutions Committee, and were adopted unanimously.

Following is the text of the Convention resolutions:

Interstate Barriers

A free competitive economy in a large and diversified country can effectively serve the public interest and the particular needs of individual consumers only if it is permitted to function on a national scale. To do so it must remain free of unnecessary local restrictions on the distribution of its products. This Association has constantly supported food regulation, federal or state, that affords benefits to consumers. It has opposed state or local regulations that impose hampering requirements which needlessly impede the free flow of the nation's food supply from producer to processor to consumer. The National Canners Association reaffirms its determined objection to all local or state regulatory requirements that specify particularized labeling requirements, or that prohibit ingredients authorized by federal law, or that peculiarly standardize products to reflect local preferences. These constitute unwarranted interstate barriers and defeat the national interests of consumers, canners, and growers alike.

Regimentation of Cannery Crops

The canning industry has been enabled from year to year to improve upon its efficiency of operation and to keep pace with the burgeoning demand for its production only because it has been relatively free of unwarranted government regulation and interference. The individual opportunity to exercise independent business judgment, based upon hard-earned experience and accumulated knowledge, has made canners acutely aware of their responsibility to pack an appealing, nutritious, and abundant supply of canned foods to satisfy the demands of buyers and consumers in all parts of the country. Mandatory production controls would impinge upon that independent judgment and largely nullify the future efforts of the industry in continuing to make quality its basic hallmark and the consumer its economic master. This Association has resisted all past attempts to include canning crops within mandatory Marketing Order legislation. Congress has consistently recognized the superiority of private competitive enterprise over a system of rigid market regulation and control of canning groups and canning, and has refused in the interests of growers, canners, and consumers alike to permit the application of compulsory marketing orders to canning crops. This Association again endorses that Congressional policy and continues to oppose any extension to canning crops of compulsory Marketing Order controls under the federal Agricultural Marketing Act or any similar state statute.

President Milan D. Smith

During the past year the National Canners Association has had the benefit of the energetic and enthusiastic leadership of a man with abundant experience both in the canning industry and in public service. Milan D. Smith, as a second generation canner with a long record of service to the industry, as a former Executive Assistant to Secretary of Agriculture Ezra Taft Benson, and as an outstanding leader in church and civic affairs, brought to his responsibility as President of the Association a fund of experience that enabled him to provide effective leadership in resolving canning industry problems. He has in superb fashion awakened an increased public interest in the achievements of the canning industry and contributed vastly to a sustained consumer appreciation of the quality and integrity of canned foods. His devotion to free enterprise has afforded to every canner a renewed faith that only in a competitive economy free of unnecessary regulatory controls can this industry keep pace with the growing, changing demands of the consumers it serves and the growers whose harvest it brings to market. The Association is deeply grateful to Milan Smith for his unselfish devotion to the canning industry, and welcomes with confidence his continued service in the management of its day to day activities.

In Memoriam

The brief tribute we now pay to the memory of our colleagues in the industry who passed away this last year can but inadequately convey our poignant feeling of loss. Formal recital of each name must serve to recall their enduring service to this industry and the full enrichment their friend-

Statement on Taking Office as President

By John C. Hemingway,
1961 President,
National Canners Association

It would be difficult for me to attempt to express my true feelings regarding this great honor given to me by you canned food packers of the United States, without delving into my family background as it pertains to the canning business.

My great grandfather started processing oysters in the year 1842 at a small plant in New Haven, Conn. From there he moved the operation in 1850 to Baltimore, where vegetables as well as oysters were processed and distributed.

My grandfather followed in his footsteps, adding additional vegetables and fruits to the lengthening list of canned items being marketed under the family trademark.

My father, Stuart Hemingway, spent his life in the same business and managed to bring up and educate eight children, of whom I am the eldest and the only one in the food business.

As you can see, my family has been in the canning business almost from its inception, and I represent the fourth generation.

While this historical background may seem a bit lengthy and possibly egotistical, I wanted to show that the honor bestowed on me today of being chosen as President of the National Canners Association for this year is really a tribute to the fine and honorable men I succeeded in the management of our small family business.

About myself, there is nothing special to note. I live on a farm outside the town of Lyons in upstate New York; also residing with me are five children and the children's mother to whom I am married. We have a vegetable plant in Clyde, N. Y., and a small fruit processing plant in North Rose, N. Y., both within a radius of 10 miles of my home. I mention these things as you might like to hear a few personal touches. To move on further, the archives of N.C.A. disclose that I am the first graduate of Cornell University to be elected N.C.A. President—the only President of N.C.A. from New York State with five children who does not pack some type of single-strength fruit drink to take care of the family's summer requirements, and, according to Carlos Campbell, am the only Vice President to completely exhaust the free "Office of the Vice President" stationery and require an additional supply.

I do not wish to infer that the above qualifies me to hold the office of President of this fine organization. However, I have one qualification that will be of great help in carrying out the duties of my new office. That qualification is complete confidence in—and respect for—the National Canners Association and for what it stands. Through several years of close working relationship with the staff and members, I well appreciate the many and devious problems besetting our Association as it so efficiently represents this great canning industry in fields of Government, Agriculture, Research, and others.

I assure all of you that I shall make every effort to contribute something of worth to our Association during my term of office.

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ship gave to each of us. We mourn the passing of:

Morrill Allen
R. N. Ball
Harold O. Berryman
Joseph R. Braden
Sidney B. Cutright
Thomas C. Dennehy, Jr.
Frank J. Fay
Guy P. Halferty
John R. Hinton
Alfred T. Hipke
Richard R. Hipke
Hal W. Johnston
A. T. Leatherbury
Earl Chapin May
William H. Ritter
John W. Rose
Emil Rutz
Edwin S. Thorne

N.C.A. Staff

A trade association can hope to serve its members and their industry in increasingly broad areas of common interest and concern only to the extent that the staff is able to perform conscientiously and diligently the difficult and varied tasks assigned to them. The National Canners Association, its members, and the canning industry are fortunate indeed to be served by a staff who each year surpass themselves in imaginative effort and enthusiastic execution of their assigned tasks. The Association expresses its sincere appreciation to Carlos Campbell and his effective staff for the consistent excellence of their work.

Guest Speakers, Allied Trades and the Press

The success of the annual National Canners Association convention is in large measure dependent upon the contributions and cooperation of a number of individuals and groups outside the canning industry. Our guest speakers, the allied trades, newspapers, radio, television and the trade press have each been responsible for a significant contribution to this year's convention. The Association sincerely appreciates all they have done, and directs the President and Board of Directors to convey its gratitude to each of them.

Creative Cooking with Canned Foods

By Mrs. Rosemary Murphy,
Mrs. America of 1961

At the start, I should like to make one point unmistakably clear: I am not a graduate home economist nor an expert in the field of home economics. I wish I were but like millions of women in this country any claim I have to the field of home economics has been gleaned through my experience as a housewife who plans menus, cooks and keeps house for her family. The kitchen of our home in Kentland, Indiana, is my laboratory and my testing bureau is a husband and five highly critical offspring aged 10 through 3. I've had to get their stamp of approval for lo, these many years and the diversification of their likes and dislikes, needs and desires has presented its own unique challenge in the field of home economics.

Why, then, am I qualified to appear before you today and speak to all of you when admittedly you are experts in the food field as manufacturers and processors of canned foods?

I'm here because as Mrs. America of 1961 I represent all the homemakers in the United States and District of Columbia and the image I represent has a dual personality since as homemakers we also happen to represent the number one purchasers of consumer goods in this country—particularly in the food field!

My selection as Mrs. America came as a result of a series of competitive homemaking events in which America's housewives cooked, baked, laundered clothes, and performed other homemaking duties to demonstrate their aptitudes and abilities as homemakers. However, as contestants we had to prove more than our prowess in the field of homemaking. We were also judged on our poise, personality, grooming and our participation in activities connected with the school, church, and our community.

Why? you may ask! What does all that have to do with a woman's ability as a homemaker? Well, for the answer, let's examine the purpose of the Mrs. America Contest.

This national homemaking competition seeks to honor the American homemaker in her role as a wife and mother and her influence in the American way of life. It pays tribute to the part she takes in activities surrounding her community, school, church, civic and charitable participation, all of which is made possible through the skill of American manu-

facturing in its development of labor-saving devices for the home. So you see, ladies and gentlemen, the Mrs. America Contest not only salutes the American homemaker; it also salutes American industry and particularly the manufacturers of consumer products for the home.

Because it is *you*, the forward-thinking manufacturers and processors of canned foods, who have made possible the very image I have been selected to represent—Today's Emerged Homemaker who has more time, energy and ability to take a vital role in American society. This is a sharp and vigorous contrast to the homemakers of yesteryear whose role was limited to keeping house and rearing her children—since she had little time to do anything else.

I am quick to admit that I take great pride in the image I represent, because in my half year of travel I've met tens of thousands of the nation's homemakers and they're intelligent, alert, knowledgeable, well-rounded, mature, realistic women who are up to the challenge of this atomic age we live in today.

For the development of labor-saving devices, for the home—packaged mixes, frozen dinners and entire entrees in a can could have resulted in an indolent, unimaginative and entirely uncreative homemaker beset with idleness and contributing nothing to society.

You may remember that there was some concern about this, particularly among the menfolk, less than 50 years ago when manufacturers released America's homemakers from the drudgery of housework.

In fact, I've been told some homemakers themselves fought their own release. It's been said that some homemakers of yesteryear were reluctant to buy or admit they bought and used canned foods! But today's modern woman takes great pride in the use she is able to make of the canned foods found on her grocer's shelf. Many of these recipes are economical and certainly require less homemaker hours of preparation, and look at the convenience of being able to take all your ingredients and foodstuffs right off your cupboard shelves. Food preservation is the single most valuable contribution to any housewife. It marks the difference between a primitive and modern society!

But while it is possible, healthful and tasteful to serve food directly from the can, the Mrs. Americas of today do not always do this. No, indeed. They look upon much of their canned foods as raw materials from which to concoct tantalizing dishes to put before their families. Their reward is measured in second helpings and the gusto with which the dish is received.

There is also a reward in developing new dishes and creating tasty meals, for in doing so a woman can give full play to the creativity that lies inherent in all of us. This is the fun in cooking. Without it, this phase of homemaking could be an extremely humdrum and tedious affair.

I'm positive from my own observations that if you polled America's housewives, asking them what phase of homemaking they like the best, the majority would name cooking. While I cannot make this statement based on any poll or recognized research authority, I can tell you that a majority of the quarter of a million women entering the Mrs. America Contest each year list cooking as their favorite homemaking activity.

You will be interested in other facts brought to light through the Mrs.

MRS. AMERICA OF 1961

America Contest, which is the most complete all-round homemaking competition in the country today.

Just for the record, let's examine the 1960 Mrs. America National Finals held this past June in Fort Lauderdale, Fla.

For the homemaking competition, Fort Lauderdale's War Memorial Auditorium is transformed into the world's largest kitchen where the 51 national finalists cook, bake, launder clothes, and perform other homemaking skills before a board of judges of nationally known home economists. These events are supervised and coordinated by a staff of graduate home economists.

In the 1960 Mrs. America Contest, in which I was one of the 51 candidates, we competed in three separate events calling for the preparation of food. These events were the preparation of a casserole recipe, the baking, frosting and decorating of a cake, and the preparation of a refrigerated dessert.

I unashamedly admit that I was as excited as a school girl to have been selected one of the winners in the casserole event, particularly since I had created the recipe myself in an effort to make vegetables palatable to my brood of five children.

Guess what the two main ingredients of my winning casserole are! A can of seasoned green beans and a can of mushroom soup. And while Mrs. Murphy may be known throughout the country for her chowder, gentlemen, in Kentland, Indiana, Mrs. Murphy is known for her green bean casserole! The silver trophy I won with my green bean casserole is, needless to say, a cherished memento in my home but I also take pride in having devised a tasty way to serve green beans that make my children smack their lips and ask for more.

I remember thinking when I was experimenting with the green bean casserole, how fortunate we are today to have canned cream soups to use instead of having to make a white sauce. Making a white sauce is such a nuisance—messy and time consuming. The convenience of making a white sauce by simply opening a can of cream of mushroom, cream of celery, cream of chicken or some other creamed soup is taken for granted by most of today's housewives.

Incidentally, I was not the only contestant who reached for a can of soup in the preparation of her casserole entry. A total of 28 soups went into those 51 casseroles prepared for Mrs. America competition at the National Finals. In fact, one contestant, Mrs. New Hampshire, used a can of soup to make her cake in the cake baking contest. Her entry was her famous Tomato Soup Cake made with a can of tomato soup. In our most recent Mrs. America newsletter, Mrs. New Hampshire revealed that she baked umpteen tomato soup cakes which ultimately became highly coveted Christmas gifts for her New Hampshire friends!

And look at the number of canned vegetables that found their way into those 51 casseroles. A total of 64, more than the number of casseroles themselves. Not to mention the 16 cans of fish, meat and fowl, 7 cans of broth or gravies, 7 cans of tomato sauce or paste, and another 7 cans of olives and pickles, and even one can of fruit! (Though 35 of the 36 canned fruits used during the National Competition were utilized in the cake baking and refrigerated dessert event.) Yes, it's safe to say that as manufacturers of canned and processed food, you played a vital role in the Mrs. America National Homemaking Contest last June as many of your fine products found their way into cakes, refrigerated desserts and casseroles for a total of 178 times when a can or jar was opened for the preparation of 153 different recipes.

Now if that's not "creative cooking through canned foods" I don't know what is! For surely you realize that these 51 contestants had already gone through a series of homemaking eliminations to have been selected top homemaker in their respective states. Surely you are aware that the recipes they took to Fort Lauderdale for the national competitions were their top recipes, the very best they had to offer in their tilt for the title as Mrs. America.

No, these were not "makeshift" women who open a few cans, toss the contents in a pan, heat on the stove and put on the table. But they are today's alert, knowledgeable women who know that there is more to cooking and eating than just nutritional value. These are the average wives and mothers in an average income bracket who have to cook with en eye on their food budgets, and the knowledge that just because a meal is chockful of vitamins and nutritional value her role as a cook does not end when she opens the can.

As a modern woman she knows that the vitamins and nutritional values have been caught in the can and because of the miracles of American manufacturing knowhow in canning and food processing, she can serve a variety of nutritional foods economically to her family. But at the same time it is her skills that count in the preparation of dishes that will not only waken the taste buds but will differ from the humdrum everyday type of foods—the meat, potatoes and one vegetable variety that require little skill, hardly any forethought, and no imagination whatsoever.

For these are imaginative, creative women who take their roles at homemakers with a serious intensity that belies their relaxed and casual exterior attitudes. Modern industry may have released them from the washboard, old-fashioned coal stove and ice box, but it added a few duties, too. Following breakfast, she ferries a group of small fry to school each day (after she has driven hubby to catch the 7:15). She works up her next project for the cub scouts after she has put a load of wash in her automatic, phones the ways and means committee of the PTA while it's in the dryer, skips lunch so that she can wash her hair for tonight's hospital board meeting! She's got to think of an uncomplicated and fast but tasty meal to serve her family tonight because didn't she promise she'd take Timmy ice skating after school and teach him the intricacies of outside edges!

Still she knows that she can't get away with being a mediocre housewife and cook for her family is too worldly and sophisticated for her to palm off ordinary meals because it's been a busy and trying day.

She's developed fast, easy and economical dishes for those days when the pace of life has been maddeningly fast but they're not run-of-the mill meals at all. Her family would never guess that some of the most scrumptious dishes take as little effort as they do and, wise woman that she is, she'll never let them know her secret.

And, believe me, when this woman complains that she's been slaving over a hot stove all day, she's only poking fun at an old fashioned complaint, because she knows that only a real "square" has to slave over a stove these days.

She may not know the Escoffier methods of cooking. She only knows that her husband is not fearful of phoning her to say he's bringing a guest for dinner or discover that the household's small fry has invited a buddy for lunch to know that she has succeeded in her role as the center pin around which her household orbits.

Today's modern woman enjoys this role because of you and other American manufacturers. We can play a much more vital part today than was possible just a half century ago and for this we are truly grateful. For if we've been given more leisure (which we have), it's given us more time to read and keep up with things (which helps us to keep in step with our ever-growing and advancing husbands). Or the time to observe that we need a new elementary school to meet the demand of a growing population in our school district. Or time to enjoy a good old fashioned snowball battle with our youngsters. It keeps us young in mind, heart and spirit and no woman would want to fight that, and it certainly shouldn't bring any complaints from the men.

Private Responsibility and Public Freedom

By George Romney, President, American Motors Corporation

I am pleased to have the opportunity of speaking before the leading representatives of an industry so basic to our economy as yours. My company, through its Kelvinator Appliance Division, shares a common interest in food preservation with your industry, although the canning principle, of course, antedates Lord Kelvin's enunciation of the principles governing mechanical refrigeration by several decades.

I was interested to note that there are canning operations in every state except Nevada. I was curious about this exception because I had always heard that certain types of citrus fruit were indigenous to parts of that state —and in fact were most commonly dispensed by coin-operated machines, usually in combinations of three!

Whether we fully realize it or not, for the fourth time in the history of our country, we are engaged in a vast struggle for survival, in which the very existence of the nation is at stake. The first was the Revolution itself; the second was the failure of the Articles of Confederation and the subsequent development of the Constitution. The third was the Civil War.

Recently I visited Hawaii, where your industry is a major economic factor. I was interested to learn from friends there, that on the morning of the Pearl Harbor attack, December 7, 1941, many citizens who stepped outside their homes to view the distant smoke, flames and noise concluded it was just a combination of practice maneuvers and some cane fields being burned.

We are perhaps as dangerously slow today, in realizing the full character of the struggle in which we are concerned, for the world is gathering around two poles.

One centers around the doctrine that the state is the highest authority, that man individually is of little consequence compared to man collectively. The other centers around the conviction that there is a divine creative force, and that through growing insight and inspiration, man has developed institutions whose function is to protect and serve the natural rights of the individual. The latter places the Creator first, the individual second, and the social organization third. The former defies the social organization, subordinates the individual and rejects the Creator.

Men everywhere are going to have to make a choice sooner or later. There is no question in my mind as to what the choice will ultimately be, but there is a question as to what will happen during the period of struggle and decision.

On the basis of the moral and spiritual concepts that motivate us, we have evolved a certain fundamental agreement regarding the principles of government which apply to the mechanics of our particular way of life.

There are eight of these.

1. Limited government.

2. Representative democracy.

3. Dispersion of governmental power.

4. Government should be as close as possible to the people, and therefore state and local governments should have exclusive responsibility and independent authority.

5. The people must assume most responsibilities and meet them voluntarily in order to avoid excessive reliance on government and the consequent abridgement of liberty to obey or disobey their Creator.

6. Governments—federal, state and local—should do for the people only those things they cannot do at all or as well for themselves, either individually or in cooperation with each other.

7. Economic and non-religious social institutions derive their authority from the people and should be responsive to their control. As technology, organizational magnitude and complexity grow, the state becomes for the people a joint instrument of economic and social control. Properly used, the purpose of government is to maintain the ability of the people to exercise direct ultimate control. This is true not only in our political life but in our economic life as well.

8. The exercise of direct ultimate economic and social control by the people requires adequate division and dispersion of economic and social power. Power concentration in one place fosters it in others. It diminishes control by the people, and thereby limits their freedom, responsibility and development.

In stating these fundamental elements of the American consensus, I have raised three obvious considerations. One is that the American political and economic principles are not just for us alone: they represent a blueprint for a new worldwide order, encompassing all nations, all races, all peoples and all cultures, if they freely choose to use these principles. Their choice must be based on our example and our persuasion and not on the basis of our coercion.

The second consideration is that we Americans have not recognized the breadth of the application of what has been traditionally referred to as the "American dream"—the dream of every individual having the opportunity of developing his fullest capacities in his own areas of choice. Truly it sums up the principles that could give greatest meaning to the hopes and aspirations of all mankind.

Our failure to carry the true message of the American Revolution in spiritual, moral, economic and social terms signified a need to reidentify the source of our Revolution. I think the magnitude of our success has created too much self-satisfaction. I believe we need a re-evaluation and a reorientation of our success to a worldwide frame.

The third is the extent of the danger from within our own system. This threatens to carry us in the name of expediency from a society based on the discipline of respect for the freedom and personal self-reliance of others, to a society based on the discipline of concentrated absolute authority and collectivism.

This, in simplified terms, is the essence of some of the basic trends in the world and at home.

I would like to deal first with the worldwide application of the Revolution that too many of us have limited by calling it exclusively "American."

A foreign observer, the French scholar, Father R. L. Bruckberger, discussed this point in his book, "Image of America." This is what he said:

". . . The great revolution of modern times, the only one that has essentially changed the forms of society, was carried out not by Russia but by America, without fanfare, quietly, patiently and laboriously, as a field is plowed furrow by furrow."

Father Bruckberger recognized the essentials of our revolution—he listed some of them and particularly Henry Ford's conclusion that the benefits of economic activities must be shared by consumers, generally, and workers as well as owners if we are going to have balanced, dynamic economic growth.

Father Bruckberger continues:

". . . Americans, return to the first seed you sowed, to that glorious Declaration of Independence in which, for the first time, the rights of man . . . were explicitly defined and defended. . . . What ill luck, how great a misfortune it is for all, that it should be the ideology of the Communist Manifesto, and not that of our Declaration of Independence, which is now conquering so large a part of the world. You Americans have been too ready to look upon the Declaration of Independence as a document designed for yourself alone, and not for other nations. How fatal an error. . . ."

The net result of the revolutionary movement in Europe was to transfer control of the state from one ruling group to another, with the people still subservient to the state. Our revolution differed significantly because it placed ultimate power over the state in the hands of the people.

Dr. Charles Malik, former president of the United Nations General Assembly, is the international mind for whom I have the highest regard. He asserts that we have lost an understanding of the basic principles on which our society was founded. He contends we do not believe in our basic principles the way our forefathers did. and that we are not fighting for them the way they did.

I think we have lost conviction and understanding to some extent because the present generations have had so much given to them, not having had to work for the privileges they enjoy. They neither understand them nor appreciate them.

Furthermore, a good deal of fuzzy thinking has developed. Bishop Emrich, bishop of the Michigan Diocese of the Episcopal Church, some time ago called attention to this fuzzy thinking:

"I don't want to cite some of the war prisoners from Korea or people at that level. I want to cite as evidence of this fuzzy thinking a man we all admire and love and respect. I regret to cite him as an example, but it will give evidence of the depth of this fuzzy thinking in America."

Bishop Emrich then proceeded to read from President Eisenhower's press conference of three years ago in which the President reported his discussions with Marshal Zhukov at the end of World War II in Berlin in which the then General Eisenhower clearly lost the argument. Twelve years later he still wasn't giving a clear answer to the Zhukov argument.

In brief, Zhukov's argument was that communism was more idealistic than freedom because under communism the individual has to sacrifice for the state, whereas in a free society people are free to do what they want. This was never answered.

But as any person should be able to explain who understands the difference between liberty and license, and between voluntary and enforced sacrifice, we are not free to do whatever we want.

The fundamental premise of Americanism is that we are the children of a Creator and that we have a supreme and inescapable obligation to comply with the principles enunicated by our Creator as we individually understand them. Furthermore, as children of God we are also brothers and sisters. We also believe we have the obligation to obey the laws of the federal, state and local governments created to preserve order and freedom under law. The obligations that we have in freedom make the coercive obligations of the communists look puny indeed.

We have the universal obligation of brotherhood. Acting on that basis, the founders of this country made governments at the national, state and local level subservient to the people, and they vested ultimate power in the hands of the citizens. To do that and to keep factions and groups from taking control, they dispersed power widely and created our unique system of checks and balances. And they established the principle of universal education as a means of qualifying us not only for citizenship but also for our role in economic and social affairs.

Out of our religious, political and social concepts has evolved an economy that is just as unique as Father Bruckberger says it is. Its principal point of uniqueness is that the people control our economic system as consumers in much the same way that they control our political system as citizens.

We tended in our early industrial development following the industrial revolution to develop European-type capitalism and cartelism. Fortunately, however, we enacted the antitrust laws and fostered the principle of competition.

There are only two ways to discipline an economy. One is through the principle of competition which places ultimate power in the hands of the people. The other is through the principle of absolute authority. The principle of absolute authority can be private as in cartels or other forms of private concentration, or it can be in

government under some form of collectivism. There are no other ways of disciplining an economy.

Fundamentally we have created an economic system that depends for its effectiveness on the intelligence with which people as consumers can act, and people as citizens can act. Bruckberger says that this is not capitalism any longer and I agree with him. He says that it has evolved beyond capitalism. The best term I have found to describe our economic system is "consumerism." The reason I call it "consumerism" is because the consumers exercise the ultimate control.

It isn't exercised by the owners and capitalists and it is not exercised by the union leaders. It is still exercised by people, although it is increasingly threatened from within as a result of the concentrations of power that are developing.

In our unique economic development we have proven four principles and also a basic mechanism. Two are the principles of competition and of voluntary cooperation. The character of the automobile industry today results from voluntary cooperation as much as from competition.

The third is the principle of rewarding people on the basis of their contribution. We are gradually abandoning this while the Russians are picking it up and creating what they themselves label as an incentive system.

The fourth principle is that for balanced and maximum economic growth, the benefits of economic progress must be shared with all consumers—not just among workers or owners or any other minority groups.

The proven mechanism is the free market where the people as free consumers register their product choices or their economic vote.

The international opportunity of promoting the good of all by practicing these principles, just in the economic area, is incalculable. At our company we have been studying the rising economic expectations of mankind and the coming changes in the worldwide economic competition. That is where the communists claim they are going to lick us.

We are examining the whole picture from the standpoint of our own products and future programs. We are now asking ourselves this fundamental free world question:

Does the present system of supplying consumer durable goods in other countries impose a severe economic disadvantage on those countries and their people, and on our own country?

We have decided that the old conventional approaches do. The result is that we are exploring new approaches. Some observers suggest that the greater integration of American industry with industries of other countries is going to be necessary. The agricultural implement industries of the U.S. and Canada are now operating on an integrated basis with great benefits both ways.

One new approach we feel merits thorough study would involve international company-to-company arrangements, with the elimination of certain tariffs and barriers. This arrangement would permit companies to set up an international manufacturing bridge, with tariff-free exchange of production between the foreign and domestic companies, limited exactly to equal production values flowing in each direction. Outside of that interchange, they would be subject to the usual tariffs and other restrictions.

Under this system, each country would be encouraged to produce not only the product or component which it is best able to produce, but also to develop the basic and natural skills of

GEORGE ROMNEY

manufacturing, rather than depending exclusively and disadvantageously on the elemental art of assembly alone. The least important industrial skill is involved in the assembly of automobiles. That is the thing all these countries want to do. That is the thing that requires the most volume to do it efficiently. Important skills are in making materials and components.

We think this approach we are talking about would develop local industry basically and practically, rather than artificially, because it would be self-controlled by the mutual character of the flow between companies. It would build equally on either side of a border, particularly in the developing nations around the world. It would extend to the consumer in each country the advantages of aggregate volume we have been able to build up in this country. It would enable people in the developing countries to buy products that depend for low cost on high volume on the basis of our volume. They would not be penalized by dependence on their own initially low-volume market potential. It is our understanding that a similar process is now in partial effect between Sweden and Norway.

In any event, it is my conviction that we need to take a fresh look at our attitudes toward world trade. An approach based on excessive nationalism will not only be self-defeating but positively harmful, and prevent the development of economic relationships that could prove a pattern for the free world in its coming struggle with a highly integrated communist economic structure.

This kind of approach is vital in the light of today's world power struggle, particularly because we have tended to spread the bounty of our new economic system largely in terms of the material end-products of that system. We have not adequately shared the system itself—so that other peoples might achieve their own national goals of becoming healthy producers rather than hand-to-mouth consumers.

Our ability to share our means and methods as well as our products, depends fundamentally on our own economic health and growth, in my judgment. Present U.S. national policies and economic trends are thwarting increasingly the economic growth necessary for our leadership of the free world and its essential victory over collectivism. Failure to share economic progress with all consumers is an end result of our present national economic policies. The maintenance of balance in economic progress has depended primarily on this sharing.

Increased reliance is being placed unfortunately on government spending and power as the means of correcting the economic problems that are developing as the result of this neglect of consumers. These economic problems are the slowing of economic growth, economic dislocation, distress areas, unemployment, and excessive American industrial expansion abroad.

In my judgment, the United States of America is in the early stages of experiencing a movement out of this country of industries that are confronted with a wage-price-cost spiral that is pricing them out of domestic as well as world markets.

Under these circumstances we are looking to government primarily to meet the situation through government spending and power. Ironically, the problems are largely the outgrowth of out-dated and deficient governmental policy. Furthermore, the rate of economic growth is adversely affected by the government's failure to maintain adequate competition, encourage voluntary cooperation and preserve the incentive of rewards related to the magnitude of contribution. These deficiencies are now apparent in trends that are ominous.

I think we are going to make a vast mistake in American industrial

expansion abroad unless we keep strong at home, and unless we establish foreign operations on a partnership basis subject to the policies of foreign nations and subject to the control and direction of their citizens. Foreign nations consider their markets theirs—not ours. They want our partnership, but they don't want our economic domination any more than they want our political domination.

I believe the opportunity to explore such an approach depends on recapturing our conviction as to the universality of American principles. Max Ways, in his recent book, *Beyond Survival*, concludes:

"Our right purpose should be to protect and extend institutions of order and freedom in the world. We have a treasure house of experience in the relation between order, freedom and technology—but this experience will not be available for politics unless our society can still deal vigorously with political philosophy at the level of the Declaration and the Constitution."

I believe those documents were divinely inspired and that they embody principles that any peoples can take and shape to fit their cultures and their societies and bring justice and freedom from bondage of all forms to their peoples.

What have we to export? Ways points out that it is more than the Horatio Alger story. It encompasses our revolutionary ideals, our dreams and the social and economic evidence of the rewards accruing from the application of our great political and economic principles.

Indeed, as Ways puts it:

"All of Asia and Africa thinks it is on a march which will make the winning of the West look like a dream of quiet waters. If our only signal is 'You, too, can be rich and powerful,' we had better douse our light, because the world already believes that message rather more thoroughly than the facts warrant."

At home, because of our tremendous progress, the demands of our political, economic, social and educational systems have mushroomed. The organizational structure of these systems has become more complex and it has made it more difficult for the individual to find the opportunity for self-expression.

Yet, we must not let either the American propensity for organization or the complexity of modern technology and organization bury or substitute for individual responsibility and action.

Is there a sufficient difference between the contribution of the sterile individual restricting his time in the activities of the organization man, and his counterpart cog in the super state?

As the president of a large corporation, directly or indirectly providing for the livelihood of more than 100,000 people, owned by more than 90,000 stockholders, a corporate member of many industry associations, and engaged in worldwide automotive and appliance operations—I am naturally faced with day-to-day decisions that can influence a great many others.

Where does my responsibility and the responsibility of others in my position first lie?

As an individual and as a citizen, should I seek to pursue company policies and programs consistent with my convictions as an individual and as a citizen? Should I relate and interpret company actions and programs against the framework of my responsibilities as a citizen? Must I refrain from positions critical of competitors with whom cooperation is essential in non-competitive matters? Does the interest of the industry as a whole take precedence when my convictions as a citizen call for a direct challenge of general industry practice or an incipient unhealthy trend? In a word, does our responsibility as citizens take priority over our obligations as a corporate industry, trade association or chamber of commerce organization man?

I think citizenship comes first. Even in shaping corporate and combined industry policies and programs, it should come first. But it should come at the time of shaping those policies and programs. If the group action conflicts with one's concepts as an individual or a citizen, and he is not willing to conform to the fundamental policy that is adopted and he sees no possibility of changing or improving the policy, he should get out—and be free to get out without direct economic reprisals.

On this point there can be no question or doubt, otherwise no organization could be effective, and citizenship would be subordinated to the group or organization. Obviously, in all other areas not covered by voluntary agreement, the individual must remain free.

The action of every large corporation influences the national economy, and what it does commercially should be related publicly to broad national problems and purposes. Neither the individual nor the corporation should stay within the commercial fence and pretend the world outside is not of concern in every area.

There is no superficial issue involved here. Millions of theoretically free individuals are immobilized and half-paralyzed in their citizenship responsibility because they are either unaware of what should come first or are unwilling to face the consequences of personal independence. The organization man with greater sense of loyalty to the organization or group than to his country or beliefs is not a theoretical thing in America. It is altogether too widespread, and it is not limited to closed shop unions. It is too widespread in most organized fields.

I have observed some of the personal penalties that inevitably follow action on the conviction that after responsibility to the Creator and to family, nothing takes precedence over citizenship responsibility.

I have observed, however, that action as an individual citizen is not only worth far more in personal satisfaction than avoidance of any resulting reaction; in my judgment, it is at the absolute core of human freedom.

We have a take-it-or-leave-it choice individually. We must either act with the conviction and exuberance of free individuals engaged in a purposeful collaboration with our Creator, our fellow citizens, our fellow workers and our fellow industry members—in that order—or risk the danger of falling short in our greatest responsibilities.

There should be no question basically about our choice because most progress starts with the individual. Free individuals and free organizations have been the mainspring of American progress. It springs from the thousands of associations, chambers of commerce, service clubs, business organizations, social organizations, unions—and most of these are a reflection importantly of some individual. Our progress does *not* spring from bureaucracy, despite our increasing tendency to look to government to supply the initiative and leadership.

The government has a big and important role to play, and I don't want to minimize it, but our current great danger from the vast expansion of government service and power and private organizations is the destruction of individual and voluntary initiative. The strength of America depends on the collective strength of her free citizens. The greatest danger from expanding public and private organizations is the weakening of the independence, character and capacity of the citizens.

It is becoming ever more important to demonstrate what can be done by private initiative. That is one reason for our recently-announced Rambler customer progress-sharing plan which I am happy to say has already produced a payoff for our customers who helped boost our December sales 13.8 percent above a year ago. That is some indication of the extent to which the American people responded to a program based on focusing the spotlight on the neglect of the consumer and sharing economic progress with everybody.

Our program had two major aims. We wanted to spotlight the dangers of the gobbling up of progress by a few well-organized and excessively powerful groups at the expense of all consumers and the national welfare. And we wanted to do what we could

to combat the present economic slowdown on our own.

The Rockefeller Report called "Pursuit of Excellence" has pointed this out:

"What most people, young or old, want is not merely security or luxury, although they are glad enough to have these. They want meaning in their lives. If their era and their culture and their leaders do not or cannot offer them great meanings, great objectives, great convictions, then they will settle for shallow and trivial meanings."

I think that meaning for Americans and others will be found in the principles of our unfinished American revolution. To get on with it, we must place greater emphasis on education and intellectual excellence. We must provide for the dispersion of the excessive power of unions and industry. We must eliminate the basic conflict in our national economic policy between the antitrust laws, which are premised on the principle of competition, and the labor and collective bargaining laws which are premised on the principle of monopoly. Those two principles are irreconcilably in conflict.

We must put political party control clearly in the hands of informed citizens, rather than excessively in the hands of economic minority pressure groups. We must put our primary reliance on voluntary co-operation rather than government action.

Finally, we must re-establish industrial democracy as a basic economic objective. Our future success will depend not on mere production primarily, but on achieving a superior application of our basic principles to our problems and the problems of others. If there is any man in the world trying to awaken America to this, it is Dr. Malik. He recently concluded a talk with this statement:

"Success does not come from wealth, fame or power. Success comes from seeking, knowing, loving and obeying God. And if we will seek, we will know, and if we know, we will love, and if we love, we will obey."

Obeying God does not obliterate the material results of the successful co-operation of free individual man, but infuses all their striving with a sense of divine collaboration and purpose.

This is the only way a bridge of freedom between peoples can be fully and solidly built—and even in this age of exploding technology, organizational complexity and need for world order, it can be built only individual by individual. It is up to each of us—and whenever we do anything just or right individually, we contribute to the strengthening of freedom everywhere.

Complete Romney Speech

This reproduction of Mr. Romney's speech was made from an advance copy supplied the N.C.A. Press Room by his office. In delivering his speech Mr. Romney interpolated new comment and extended some of his statements. His speech was taped, but the transcript of the tape was not available in time for this issue of the INFORMATION LETTER. Copies of the entire speech as delivered in Chicago will be supplied to members who address their requests to the Information Division, National Canners Association, 1133 20th St., N. W., Washington 6, D. C.

FOOD EDITORS CONFERENCE

PRESIDING: MILAN D. SMITH, Smith Canning and Freezing Company, Inc., Pendleton, Ore., 1960 President of N.C.A.

WELCOME: KATHERINE R. SMITH, Director, N.C.A. Consumer Service Division

ADDRESS: "Wholesomeness and Purity of Canned Foods—The N.C.A. Protective Screen Program"—NELSON H. BUDD, Director of Information, N.C.A.

ADDRESS: "Consumer Economics"—CARLOS CAMPBELL, Executive Secretary-Treasurer of N.C.A.

ADDRESS: "Legislative Outlook on Activities Affecting Canned Foods Consumers"—R. B. HEINEY, Assistant Secretary of N.C.A.

ADDRESS: "Mrs. Murphy Becomes Mrs. America Overnight"—MRS. ROSEMARY MURPHY, Kentland, Ind., Mrs. America of 1961

ADDRESS: "Canned Foods Labels Promote Wise Buying"—GEORGE E. STEELE, JR., Director, N.C.A. Descriptive Labeling Program, and KATHERINE R. SMITH, Director, N.C.A. Consumer Service Division

ADDRESS: "The Consumers' Interest in the Canners' Exhibit"—W. D. LEWIS, Secretary-Treasurer, Canning Machinery and Supplies Association

Immediately following the Annual Meeting, N.C.A. gave a special luncheon to about 75 food editors of newspapers and magazines who were special guests at the Convention of the Association. This was the opening event of the 6th Annual Food Editors Conference, one of the continuing projects of the N.C.A. Consumer and Trade Relations Program. Among the hosts of the luncheon were, besides N.C.A. officers and staff personnel, the members of the current C. & T.R. and Consumer Service Committees, as well as some of the member home economists present at the Convention.

The guest editors were introduced in a novel way. Attendance prizes of five silver dollars each, also canned and specially labeled, were lined up from end to end on the speakers' table. As the roll call of the guest editors was read, they came forward in single file to receive their prizes from President Smith and Katherine R. Smith, Director of the N.C.A. Consumer Service Division.

President Smith, in opening the formal program that followed, explained that the Food Editors Conference this year had been expanded to include and recognize the publishers of the Chicago area suburban newspapers, a field of journalism that has enjoyed a remarkable growth recently.

Mr. Smith pointed out that the cranberry episode of last year created a problem, in the wake of which a num-

ber of sensational stories reached the public the effect of which was to shake their confidence in the safety of commercially-prepared foods. "I was very happy, when reporting to the Governor's Council of the State of California, to be able to tell them that reputable food editors, like you, did not find from their reader-mail, that housewives were falling for such scare techniques," he stated.

Various members of the N.C.A. staff explained to the food editors special phases of Association activity such as the Protective Screen program, legislation and economics affecting consumers, and the descriptive labeling program. Mrs. America again was a guest speaker, describing her experiences in winning the contest, and W. D. Lewis, Secretary of the Canning Machinery and Supplies Association, explained how the annual Convention Exhibit has benefits that carry through to the consumer table.

President Smith closed the meeting by introducing the chairmen and members, respectively, of the following Committees: Consumer and Trade Relations, Consumer Service, and Labeling, and paid a tribute to the Dudley-Anderson-Yutzy staff, which annually arranges, books and stages the events of the two-day Food Editors Conference.

Following the program, each food editor was introduced to an individual escort from the Forty-Niners organization, who served as her guide in a tour of the Exhibit. The farewell event of the Conference was a cocktail party and reception held for them at the end of the day.

The 62 editors in attendance represented a good cross section of the pages and columns that are read by consumers. They represented daily and suburban newspapers; the bulletins or house organs of food associations and firms—not only canning but allied industries; food trade journals; institutional trade magazines; women's magazines of national circulation; and radio-TV commentators.

Welcome to the Food Editors

By Katherine R. Smith, Director, N.C.A. Consumer Service Division

The canning industry has given me the privilege and pleasure of acting as their spokesman to welcome you to this Food Editors Conference. We do so most heartily for we have all looked forward to meeting with you, our colleagues and friends.

I'm not quite sure that this should be called a Food Editors Conference. It might better be called a Food Communications Conference, because represented here are many areas of the food industry.

We would like not only to welcome you but we want also to express our very grateful appreciation for your assistance. The newspaper food editors, daily, suburban, and community; the magazine food editors; women's magazines; institution magazines; Sunday supplement magazines and trade magazines; radio and television friends; and certainly you consultants and cook book authors—all of you have been most generous in giving assistance to your public in practical, exciting and superb uses of canned foods.

KATHERINE R. SMITH

Also today we want to pay tribute to our home economics colleagues who have so generously teamed canned foods with their products in recipes, releases, and photographs. Our National Canners Association releases, recipes and photographs are evidence that we likewise find your products and canned foods wonderful team mates. Our very sincere thanks to the home economists representing cereals, wheat flour, baked foods, meat, poultry, eggs, cheese, dairy products, and packaged mixes.

Again a most cordial welcome to all of you.

Wholesomeness and Purity of Canned Foods— The N.C.A. Protective Screen Program

By Nelson H. Budd, Director of Information, National Canners Association

About 55 years ago, the *Ladies Home Journal* proposed an interesting —and somewhat ominous—do-it-yourself project to its readers. The magazine published a piece suggesting practical tests for identifying adulterated foods. By following the directions in the article, ladies could find out if coal tar dyes had been used in the food they bought, test the purity of their flavoring extracts, distinguish fresh butter from stale, coffee from chicory.

Such a project would be absured by today's standards. The ladies have long since put away the test tubes. Now their principal do-it-yourself activity is to add an egg to their cake mix or herbs to their canned vegetables. For many years now, government and industry have worked together to guarantee that consumers receive pure, wholesome, tasty and attractive foods. The Federal Food, Drug, and Cosmetic Act is the legal form of this guarantee. The daily work of thousands of people in the canning and related industries makes this guarantee good.

The canning industry's record of cooperation with government agencies is outstanding. It has been publicly acknowledged by every Food and Drug Commissioner from Wiley to Larrick and by most Secretaries of Agriculture. In fact, prior to 1960, canners were active in framing some of the regulations that went into the first Pure Food Act. Some of these canners established the National Canners Association, in 1907, and in 1913 created the first research laboratory of any trade group to carry out scientific research for its members, with its first major assignment to make canning operations under the Pure Food Law practicable and workable.

I'm stressing this ancient history because I think it's important for you to know that concern about safety and

wholesomeness is nothing new to the canning industry. It is a past, present and future preoccupation of canners. Like canned foods themselves, it moves with the times. Increasing scientific knowledge brings new methods to food growing and processing; it brings new convenience and variety to consumers —and it brings its own peculiar set of problems. The newest safety program undertaken by N.C.A. during the past year centers on the proper use of the proper agricultural chemicals, specifically pesticides. We call it the N.C.A. Protective Screen Program.

In some quarters, the word "chemicals" has recently come to have a needlessly alarming connotation. People are apt to think of the chemicals that cause household accidents or those that play a key role in certain detective stories. When they make this mistake, it's because they fail to understand the crucial function that chemicals actually serve in agriculture. A few basic facts should illustrate what I mean. In 1910, 50 years ago, this country's population was roughly 92 million and our nation was almost 35 percent agricultural. Since then, our population has almost doubled—it now stands at about 180 million—and the farm population now represents only about 12 percent of the total. Meanwhile the total acreage under cultivation has increased only slightly. In other words, every farmer working an acre of land now has to feed approximately three times as many people as that farmer and acre fed 50 years ago.

When we consider that yield per acre has risen so sharply, it becomes even more extraordinary that the standards of eating in this country have risen at the same time. The growth rate of children and the decline of diseases like pellagra, due to malnutrition, testify to this fact.

Much of the explanation for these apparently contradictory trends lies in agricultural chemicals—the *proper* chemicals, *properly* used. On this subject, Charles B. Shuman of the American Farm Bureau Federation has made an apt observation. "Without chemicals," he has said, "there would be no fruit. Not only the quality of the supply, but the supply itself depends on them." Commissioner Larrick makes another interesting comment: "We should not lose sight of the fact that food additives are an integral part of tremendous progress being made in modern food technology, and that they are being safely used for a host of purposes that are beneficial to the consuming public." Among these purposes, he mentions their usefulness in increasing production, reducing cost, promoting cleanliness, preventing spoilage, increasing shelf life, and improving the quality, appearance, texture and nutritional value of our foods.

So you see the problem is not to eliminate the use of chemicals but to use the safe ones wisely. The N.C.A.'s six-point plan to accomplish this has become widely known throughout the food industry, has received government blessing, and enjoys the flattery of imitation by other food industries.

Instead of citing and reviewing the six points in their technical detail, let me condense and characterize them by saying that they are based on the fundamental and common sense premise that canning crops should be treated only with federally-registered pesticide chemicals in recommended amounts and under authorized conditions.

The Protective Screen Program educates all factors involved; it embraces close communication between canners and their growers; and it includes recordkeeping, to insure that canners process only those crops that are free of contamination.

In short, the Protective Screen Program is designed to prevent contamination of the raw product and the processing of any contaminated raw product, the second important phase of the program being to maintain wholesomeness during processing so that the product will be delivered intact to the consumer in its safe and pure state.

I re-emphasize that this type of activity is not new to the canning industry, but is a continuation of action it has pursued for half a century. To be sure it was heightened and sharpened during 1960 in many ways. As an illustration of the industry's vigilance concerning the safety of its products, let's briefly enumerate some of the steps followed last year and that are being continued in the future:

(1) Issuance of 11 supplements of our membership bulletin, the INFORMATION LETTER, and of 26 Pesticides Newsletters. These contained reference material on legally permissible uses for chemicals in agriculture.

(2) Visits of our Raw Products personnel to Experiment Station directors and department heads to stimulate interest in the problem. This resulted in establishment of active and comprehensive programs in many of the states.

(3) Staff contacts with growers and canners at special meetings, conventions, and fieldmen's schools.

Caution and care do not end in the fields and orchards. At the receiving platforms of the canning plants, canners have been advised to supplement their field control programs with frequent enough checks to make sure that only legal chemicals have been used and in the proper manner.

The N.C.A. Research Laboratories have given special attention to developing simple tests that detect the presence of additives, for once the wholesomeness of the raw product has been assured, canners still have hurdles to surmount. They must process the

NELSON H. BUDD

product in such a way that it retains this wholesomeness. The N.C.A. Laboratories are active in this area, working continually to develop more efficient washing, peeling, and preparation procedures to remove any objectionable residues from raw products before canning. As a matter of fact, the methods are so efficient right now, that the FDA made an interesting statement about them a year or so ago. Commenting on the problem of fallout and possible produce contamination, FDA authorities stressed the need for very thorough washing and soaking of many vegetables. They went on to recommend the use of processed vegetables to householders who didn't want to bother with this rigorous procedure. According to the FDA, the washing of vegetables by mechanical means in the canning plants is much more efficient and thorough than manual cleansing by even the most diligent housewife.

The FDA has published several lists of substances which are generally recognized as safe. Canners have been instructed to check their food ingredients against these lists, and to consult N.C.A. when any doubtful questions arise. Canners are urged to keep the same detailed records on processing operations and ingredients as on agricultural procedures. Product quality is the first consideration all the way through. And remember this: canners know that they can take no chances with food additives or anything else because the responsibility for their products cannot be shifted elsewhere.

Just because 1960 has seen our Protective Screen Program operate effectively does not mean we are now relaxing. The concern about chemical pesticide residues, and the general safety of food persists. The Program

is here to stay. Canners will continue to be alert to the need for careful supervision of pesticide use by their growers and to maintain accurate recordkeeping on use of all pesticides involved in production of canning crops.

The N.C.A. is continuing its work with the Agricultural Experiment Stations to encourage close interdepartmental cooperation in developing recommendations for pesticide use. An important current example of government-industry team play in this regard is the preparation and publication next month by the USDA Pesticide Regulations Branch of a so-called "reference bible" that will list all pesticide chemicals that have been registered for use on agricultural crops, their tolerance status, maximum rates of application permitted, and limitations on use. This "bible" will be the recognized authority on legal uses for pesticides.

The industry will continue during the years to come to follow closely pesticide and additive problems, working with the Food and Drug Administration, the Agricultural Experiment Stations, the Extension Service, and the USDA to protect the interests of the consumer.

I'd like to leave you with that thought. Many people have a picture of government and industry, with government cast in the role of St. George and industry playing the dragon. It's time for that picture to fade out permanently. The fact is, when it comes to safety, government and industry work hand in hand. Industry—the canning industry at least—is just as eager as government to protect the consumer and give her the best possible product. Canners found out long, long ago that good food is good business, and that their brand name is their guarantee to the consumer.

Legislative Outlook on Activities Affecting Canned Foods Consumers

By R. B. Heiney,
Assistant Secretary,
National Canners Association

As food editors who have the responsibility of informing and advising millions of American homemakers of the latest developments in food preparation, you are well aware that all of these good ladies are interested in food bills—at least, the size of the food bills which they have to pay at the grocery store. That's the kind of bills which they can see, and feel, coming out of their own pocketbooks.

There is another category of food bills, however, which deserve as much, or more attention than the ones we have to pay at the check-out counter. This second category of bills can also take a large bite out of our pockets, or pocketbooks, but in a more indirect and insidious manner. I'm referring to the bills which are introduced each year in the Congress of the United States. Regardless of how we may feel as individuals on the question of Senate filibustering or the powers of the House Rules Committee, we can be glad that not all of the bills that are introduced—more than 2,000 in the first week of the present session—will ever become law.

Since this is only the first week of the Kennedy Administration, it would be a little premature to attempt to assess the prospects for the food bills, and related proposals, which have been or will be introduced in the first session of the 87th Congress. On many of the subjects which are of greatest interest to food manufacturers, and canners in particular, the Administration bills had not been introduced when I left Washington last Friday. Nevertheless, on the basis of our experience with the Congress, as well as on the basis of statements which have been made by President Kennedy and his staff, both during and after his successful campaign for election, it is possible at this time—even without a crystal ball—to look ahead a few weeks or months and identify some of the major legislation which is likely to rear its head at this session to plague canners, and we sincerely suggest that the subjects we will discuss could plague consumers as well.

That's another way of saying that the interests of canners and consumers in food bills are, in many cases, identical. And that goes for both categories of food bills, as we have referred to them here today. You know better than I that smart homemakers can cut down the size of their family food bills, as well as add variety to their menus, by using canned foods. You are also aware that the prices of canned foods have remained at a relatively low level during the past 15 years, in relation to the BLS Consumer Price Index and other cost-of-living indicators. Now, let's look at the bills in Congress which would affect both canners and consumers of their products.

First of all, I should mention at the outset that the National Canners Association does not issue public statements or make known its position on a very large number of legislative proposals. Many of the House and Senate bills which are introduced, for reasons best known to their sponsors, have no chances of being considered and do not merit serious attention or comment. Other bills are so general in nature and would affect so many varied segments of our national economy that they are adequately covered by larger, more heterogeneous organizations than ours. The N.C.A., with its limited staff and budget, attempts to identify the measures which would have the most direct effect upon the canning industry, its growers, and its customers—the consumers of America. That is the rifle technique, rather than the shotgun approach, which we have used in the past and will continue to employ in the present session of Congress.

There appears to be little doubt that a wage-hour bill of some type will be enacted this year. Whether the minimum hourly wage for presently-covered employees will be raised from $1.00 to $1.25, as desired by the Administration, or to a slightly lower figure, depends on the outcome of the battle that will be fought in the committees and on the floor of the Congress, starting very soon. Additionally important, however, is the question of what will happen to the canning industry's present exemptions from the overtime provisions of the Fair Labor Standards Act.

When that Act was passed in 1938, Congress recognized the dependence of the canning industry, and the growers of its raw products, upon natural factors, uncontrollable by man, which justify these exemptions. An industry like ours cannot control working hours during the unpredicable peaks of the packing season, and must rely upon whatever labor is available in the rural areas.

In areas where seasonal canneries are located, the brief canning season is awaited by many families who use cannery work to augment their income. Husbands and wives depend

R. B. HEINEY

upon the extensive hours of work at the local canneries for substantial supplemental incomes. If the exemptions are removed, the slender profit margin in the canning industry would make it unprofitable for canners to pay time-and-a-half for overtime beyond 40 hours. They would be forced to curtail production while looking to other areas for supplemental labor.

The labor factor in their cost of production would increase with the obvious result that the selling price would increase. This hurts in several ways:

(1) the consumer pays more;

(2) the individual worker receives less;

(3) the canner earns less.

No one gains except that we advance the rate of inflation.

As this 87th Congress gets under way, there seems to be an awful lot of activity on behalf of the "consumer." President Kennedy has said he would appoint a consumer's counsel in the White House staff. Secretary of Agriculture Freeman is reported to be planning to appoint a "consumer oriented" official on his staff.

The Food and Drug Administration established a consumer program about a year ago, with a director in Washington and 17 consumer consultants located in its district offices around the country. The USDA is reported to be toying with the idea.

Incidentally, if government payrolls get overloaded with "consumer representatives" your work will be made very easy: you'll have all your news prepared for you and editorialized to boot. I can belabor this; you won't have to do any more independent thinking for your readers; just use the daily handout from the government agency.

We understand that Senator Kefauver is planning to reintroduce very soon the bill which he and more than 20 other Senators introduced at the last session, to establish a Department of Consumers. On the opening day of the present session, two Congressmen introduced resolutions which, if adopted, would establish a Joint Congressional Committee on Consumer Interests. And so it goes. Since you and I are consumers, it might appear at first glance that we should be grateful for all of this interest and activity on our behalf. But if we can turn back our memories about 25 years (and I'm sure this does not apply to any of you good ladies), we may be pardoned if we are a little apprehensive and skeptical when today's politicians begin to show so much concern over the "problem of the consumer."

Something tells us that we must start preparing to re-educate the public on the fallacy of such discredited schemes as mandatory grade labeling, mandatory container standardization, mandatory production and marketing controls, mandatory this, and mandatory that.

A strong movement is under way, as you know, to disinter the old stamp plan for distributing surplus and other food items to needy families and individuals. Those of you who recall the flagrant abuses and bureaucratic headaches of the old New Deal food stamp plan will shudder along with me at the prospects of turning the clock back in this manner. Yet we have already seen several bills introduced at this session which would put this program back in business, on a nationwide scale. One of these bills would establish an arbitrary standard of minimum nutrition for each family and provide for the allotment of foods, both surplus and non-surplus, to those families whose nutritional intake falls below the minimum.

Incidentally, there has been considerable speculation that Secretary of Agriculture Freeman would initiate a food stamp plan, at least for some of the "distressed areas," soon after he took office as Secretary of Agriculture. The discretionary authority to do so is already on the books.

We are strong for good nutrition and we want all our citizens to have full stomachs. In fact, that's our purpose in being in business. But the trouble with food stamp plans is the inherent invitation to waste and fraud and disruption of established channels of distribution.

The canners' interest in the actions of Congress is identical with that of the consumer. We hope that you will advise your readers to take a long hard look at legislation proposed to benefit the "consumer." Don't let them end up paying for two sets of food bills.

Mrs. Murphy Becomes Mrs. America Overnight

By Mrs. Rosemary Murphy, Mrs. America of 1961

It would be a waste of your time for me to speak to you today as Mrs. America. For as Mrs. America I am only the collective symbol and image of all of America's homemakers and there's very little about them that I can tell you that you don't already know. For most of your time is spent writing about them and for them. This I know for I'm one of them.

Until I became Mrs. America, yours was the unseen hand and face behind the articles and stories I read on cooking, interior decorating, laundry techniques, etc., and one of the many enjoyments I've gotten out of my reign as Mrs. America so far is to recognize the by-line on a story and realize that it's more than a name now; it's a real person. As my husband says, "I'm still just a country girl from Kentland, Indiana!"

It's been my privilege to talk to many food and homemaking editors so I know that you're not nearly as interested in learning about my homemaking techniques and recipes as you are in learning about the changes that have taken place in my life since I became Mrs. America! So that's what I'll discuss today—"How it feels to be Mrs. Murphy one minute and in the next minute become Mrs. America."

Well frankly, it all happened so fast at first that I really didn't have time to even think about it. In fact, it took me quite a while to realize I was someone besides Mrs. Murphy.

After all, I'd been away from my hometown of Kentland for two weeks on previous occasions, but I had never been met with two brass bands, 22 carloads and one bus load of friends and neighbors at Midway Airport, a motorcycle police escort all the way to Kentland, parades and receptions in Kentland and the surrounding towns, all of which touched and overwhelmed me—and lasted three whole days. Why even my children showed me a new respect.

At first I felt a little guilty, as if I were taking credit for something I didn't deserve because I didn't feel any different. I was the same Rosemary Murphy as before and consequently I felt pretty silly accepting keys to the city and other honors normally reserved for celebrities.

Then all at once, I came out of my stunned condition and realized that I had, indeed, been placed in a new role. For one thing, my phone never stopped ringing with invitations to visit here, speak there, present an award to this group, or open a new hospital wing. It was a dizzying whirl and I was mighty grateful for the help I received in sorting out these requests from Mrs. America headquarters, originators and administrators of the contest.

Then there was my mail. It had never contained more than a few advertisements, bills to be paid, and an occasional letter from a friend or relative. Suddenly it was a veritable daily blizzard of notes, letters, inquiries, requests, complaints and what have you—bigger even than the week or ten days before Christmas mail of greeting cards. All required sorting, reading, and answering.

If I hadn't realized it before, I knew now that I had momentarily ceased to be just Mrs. Murphy and had become Mrs. America, representing all of the nation's housewives. It was a little frightening at first but I was determined to carry it out with all the energy and skill that I could muster.

But it took more than that. It took the understanding of my family and friends and the helpful guidance and understanding of the Mrs. America headquarters staff who know so well the new experiences I would have and who safeguard with a stern vigilance my usual role as wife, mother and homemaker.

As an example, let's take my appearance schedule. I do not "tour" as Mrs. America. I make appearances throughout the country but I'm scheduled to do this for short periods of time and then I'm home again with my family so that I'm not an absentee wife and mother.

Whenever an appearance schedule or date permits, I take one of my children with me on a visit to another city, and many times I'm accompanied by my husband. Not only has this given them a chance to share in some of the fun but it has helped them understand some of the obligations and responsibilities that go with my new role.

Incidentally, attention was one of the initial major worries my husband and I harbored during those first few weeks after I became Mrs. America. Since the town of Kentland had gone all out in a magnificent homecoming in which my children shared the limelight, we were afraid that some of the pomp and circumstance might go to our children's heads and make them feel a little superior to some of their young friends. But children have a wonderful adaptability and a definite penchant for the realistic and practical side of life. For after they tired of showing off my new crown and an album of Mrs. America pageant photographs to their friends, they picked up their baseball gloves and headed for the ball diamond where they were judged, just like any other little boys, on their ability to catch a high fly ball, swat a two-base hit and slide home successfully though damagingly to another pair of jeans.

If I claimed that the Murphy household hasn't changed some since my selection as Mrs. America, I would of course be making a false claim. There is no doubt that I am at home less than before. But here my family has been so wonderful. My mother, George's mother, and the children's aunts and uncles have made very sure that George has not had to be both mother and father during my brief absences from home. We're also fortunate to have a wonderful housekeeper whom the children love and respect. In fact, she's so good that George says he wants to put her up for Mrs. America next year, or maybe grandmother of the year would be more appropriate.

Incidentally, I don't wish to create the impression that my husband is incapable of caring for the children. For he is well skilled in the art of rearing children. I'm one of those fortunate women whose husband has always taken a great and active interest in our family from the time of their birth. He enjoys his children, joins in their activities and helps them develop their skills. He has done this with little or no bidding on my part and only an occasional coaching from the sidelines. He's a real gem! Both as a husband and a father!

I'd like to say, too, that everybody's job in the house is made easier by the help we get from convenience products. It takes just as much efficiency and organization to run a house well as to run a business, particularly if you have outside interests or obligations. Besides which, I have to please my husband and children; maybe I shouldn't say "have to," because I *want* to please them. Especially when it comes to cooking, convenience products make an enormous difference. I wouldn't think of cutting up beans or making applesauce when I can open a can and get such good food. The same time it would take me to do the kitchen chores of peeling and preparing fruits and vegetables can be used for making them interesting.

One of the final cooking events in the Mrs. America contest was preparing a casserole dish. I chose my best invention—its two main ingredients were a can of seasoned green beans and a can of mushroom soup. You may be interested to know that the 51 finalists, one from each state and one from Washington, D. C., used 64 cans of vegetables, 28 cans of soup, and a number of canned sauces, meats and other things.

There's a good reason why busy women like these rely so much on canned foods. They know these foods are nutritionally sound, they appreciate the low cost, the variety, and let's not overlook the flavor. But most of all they know they have to put pleasing meals on the table without spending all day in the kitchen. They have too many other important things to do, in and out of the house, to fuss over KP duties. So they have worked out ways of making imaginative dishes with choreless products.

I always make sure that my canned foods shelf is well stocked and I take along a checklist on my weekly shopping trip so that I'll have plenty of canned vegetables, fruits, soups and so on. I would never take the time to make white sauce, for instance, when I can open a can of cream of mushroom or cream of celery soup and have a delicious sauce ready-made.

My travels have been a great boon to the children's geography lessons for they spot the many cities I visit on their big map of the United States and their world is now ever so much larger than a trip to Chicago.

On my return home they shower me with hundreds of questions. "Did you see any oil wells in Texas?" "Did you meet any cowboys in Arizona?" I'm besieged on all sides. They're vitally interested in the trips I make. They've also become extremely knowledgeable about the State of Florida, deep-sea fishing, marine life, skin-diving and the like because they know I've won a home there as one of my Mrs. America prizes. They're also looking forward to a two-week's visit in Fort Lauderdale with George and myself during the next Mrs. America pageant, which is also one of my prizes.

One of the most amazing results of my candidacy in the 1960 Mrs. America contest was the boost it gave to my seven-year-old son, Patrick, in his school work. Pat had become a great concern to my husband and myself during the end of the school period last year since his teacher reported that he simply would not apply himself to his class work. His teacher advised us that he had the ability but he simply did not have any interest in learning. He showed enthusiasm for only two school periods, lunch hour and recess.

Then on April 24, I won the "Mrs. Indiana" state contest conducted at the Lake County Home Show in Crown Point, Indiana. My home town of Kentland was agog with excitement at the good news. The attendant town-wide enthusiasm gave Patrick's school teacher a new idea in her efforts to stimulate him in his school work. She had a private talk with Patrick and said, "Wouldn't your mother be proud of you if you worked a little harder in school now particularly since she's done so much to make you proud by becoming 'Mrs. Indiana'!"

The challenge worked and in less time than it takes to tell you, Patrick was taking an interest in his school work and doing his lessons and exercises remarkably better.

This was an amazing improvement. Apparently my becoming "Mrs. Indiana" gave Patrick a recognition he had never had before. As the middle child in a family of five, it is, of course, quite conceivable that Patrick felt he was a nonentity since he was not young enough for those special privileges reserved for the youngest, nor old enough for those special privileges which belong to the eldest. Whatever the reasons, my husband and I are eternally grateful to the Mrs. America contest for helping Pat to become an individual in his own right.

But the children have other methods by which they can capitalize on Mrs. America. My number two son, Michael, and a group of his playmates were climbing an apple tree on a property in the neighborhood when the lady of the household spotted the boys and came out to caution them that they might get hurt. Looking speculatively at Michael, she asked, "Don't I know you?" "Yes, you probably do," replied Michael winningly, "I'm Mrs. America's boy!"

But like most mothers, I'm chatting too much about my children. Let me tell you about some of my experiences

since becoming Mrs. America. A personal appearance in the Dakotas this fall took on a great deal of excitement for me when I was adopted by the Sioux Indians. I can neither pronounce nor spell my new Indian name but I do know that translated it means, "Princess Shining Star." It's been a thrill, too, to meet the governors of so many of our states and other dignitaries and personalities, who, like you, were just names to me before this year.

With four baseball-minded sons, I got a great kick out of pitching the first ball for the Dallas Rangers this summer, even though my sons wouldn't have been too proud of their mother's ability as a pitcher since the ball bounced before it hit home plate!

It was quite a revelation to me to realize that many of the women I met during the course of the personal appearances I have made have shown a marked reserve upon first meeting me but warm up considerably after a time.

I was considerably puzzled about this at first. But after becoming better acquainted with many of the homemakers I met some of them finally confessed that they had thought I would be very much different from the way I turned out to be. It seems that most of them had thought I would be a glamorous, sophisticated type of woman demanding all kinds of service and attention. So they're surprised and visibly relieved that I am just an ordinary homemaker like themselves and much more accustomed to piloting my own station wagon loaded with either small fry or groceries (and sometimes both) than I am to being chauffered about in a long, sleek convertible.

As soon as this realization becomes apparent to them, we relax and become friends. In fact, in no time at all we're exchanging opinions and ideas on a multitude of subjects of interest to homemakers—interior decorating, child rearing, fashion, the rise in the cost of living. You know the type of things women discuss when they get together: I've made many friends during my travels and I count these friendships as one of the most rewarding of the many benefits I have so far received during my reign as Mrs. America.

I hope this has given you some insight on what it has been like to be taken out of my previous small but treasured sphere of influence as Rosemary Murphy of Kentland, Indiana, to become the living image of all of America's homemakers. To put it mildly, it's been quite a jump.

I've learned a great deal, I've broadened my scope as a woman, a wife and a mother, and I've learned a new respect for my own occupation as a housewife just in meeting other homemakers and realizing the strength of our ranks.

I'm particularly glad that I had the foresight to keep a daily journal of my activities since my coronation as Mrs. America and I hope some day following my reign to sort out all these notes on my experiences, my thoughts, and the education I've received in the role of Mrs. America for a book. I think it might make interesting reading to many of the nation's wives and perhaps give them a sense of their importance as homemakers in the growth and continued progress of our great country.

One fact remains evident, and that is that none of us needs to feel the least bit apologetic when we fill in the word "housewife" in the space provided for occupation! On those occasions when I address homemakers I never fail to remind them that we're not only responsible for our numerous housekeeping duties but as wives and mothers we are also responsible for the future generation of our country.

Or as I wrote on my Mrs. America contest application blank, "The destiny of our world lies in our homes."

Canned Foods Labels Promote Wise Buying

By George E. Steele, Jr., Director, N.C.A. Descriptive Labeling Program, and Katherine R. Smith, Director, N.C.A. Consumer Service Division

STEELE: With more and more of our food coming to us in packages nowadays, we must depend increasingly on labels to give us the information to make the right buying choice. And with self-service the established method of buying, the label becomes the spokesman for the product and its manufacturer. In our industry where the units of food amount to some 24 billion, the label—or rather, all 24 billion of them—often represents the only face to face meeting between packer and customer.

This means that labels have become extremely important. They are important to our industry because they are our representatives. They are important to consumers because they are the primary guide to intelligent and efficient buying.

Today we would like to present some of the basic facts about canned food labeling, with Katherine Smith asking the questions and me answering them. We will try to cover the subject thoroughly, but if you have additional questions we will be happy to try to answer them.

MISS SMITH: We know the Federal Food, Drug, and Cosmetic Act specifies a list of facts which labels must include to make the product legal for interstate commerce. These facts have been determined through joint study by the government and the National Canners Association. What are the legal requirements?

STEELE: The law provides that every label must state:

1. The product name. Simple enough, but it is your first guide to what the can contains. It should be in clear readable type.

2. The name and address of the packer or distributor, to tell you exactly where the product came from.

3. The net contents by weight or liquid measure, to assure you of getting full measure for your money.

4. The variety, style, or packing medium when relevant. This tells you whether you're buying whole kernel or cream style corn, for instance, and whether the peaches are packed in water, light syrup or heavy syrup.

MISS SMITH: Let's show a typical example of a label and indicate the required information.

STEELE: All right, we'll take the label of a simple, uncomplicated product—canned beets. To meet FDA requirements, the label need only list this information: product name, packer name and address, and net contents, in English.

MISS SMITH: Then where do we get all the facts we're used to seeing?

STEELE: The National Canners Association has for many years recommended to the membership an approach which we call descriptive labeling. It is designed to give consumers as much help as possible, via the product label.

For instance, here's what canners add to make the legal label a descriptive label:

1. A clear picture of the product, as close as possible to the appearance of the product in the can.

2. The brand name, so that the consumer can easily identify a product she has tried and liked.

3. Size, or degree of maturity.

4. Color.

5. Seasoning.

6. Number of servings and cups.

7. Recipe panel with serving suggestions.

Now, here again, is the government required label.

And here is the descriptive label with its complete information to guide the consumer in anticipating the looks

GEORGE E. STEELE, JR.

and the taste of the product she will find inside the can.

MISS SMITH: To list every bit of pertinent information, a label would have to be the size of a billboard, or else we girls would need a microscope to read it. What things does the label take for granted?

STEELE: If the product is offered for sale in your supermarket, you know that it has passed these hurdles:

1. The food must be processed from pure and wholesome, undamaged raw products.

2. The processing plant must be clean.

3. The workers there must be supervised to ensure sanitary food handling.

4. The container must be made from safe materials that can have no harmful effect on food.

5. No harmful preservatives may be used at all and harmless preservatives or additives must be used in minimal quantities and listed on the label.

6. A package may not be designed in such a way that it looks as if it contains more than it actually does.

7. The label may not make any misleading statements, either directly or by implication.

MISS SMITH: This last provision covers quite a lot of territory and is worth examining further. A label could theoretically mislead a shopper not only by the information it contained but by the way it presented the information. Type size, selection of brand name, order of listing ingredients and such things can easily influence the shopper's impression even if the label contains the right information. Therefore, all information on a label must be printed in clear, legible type; ingredients must be listed in their order of importance; if a product is an imitation, the fact must be plainly stated; and the brand name may not be used to suggest a more authentic or costly product than the container actually holds.

STEELE: Thus, you may be sure that any product you see on the shelf has had a thorough going over.

MISS SMITH: George, would you please comment on the canning industry's point of view about grade labeling?

STEELE: It has been suggested by some that the government should set up A, B and C grades for various canned foods. At first glance, such a grade labeling system might appear to simplify the shopper's problem of deciding which can of food she wants to buy. On closer examination we find that such a grading system tells the housewife much less about the product than does descriptive labeling and, even worse, could actually confuse and mislead the consumer as to what she is actually buying.

Grade labeling is based on the fusing together of several characteristics which someone has chosen as being important and ranking varying degrees of those characteristics into good-better-best rankings.

As a case in point, I can think of no better example than an old favorite of mine, and maybe of yours, the martini. How many martini experts do you know who agree precisely on the characteristics of the ingredients, the proportion of the mixture, and the preparation method?

Yet in grade labeling one set of standards would have to be developed and designated A, another B, and a third C. The purchaser of the martini in question would know only that on some basis, unknown to him, one martini is considered by the grader to be of better or poorer quality than the others. Is flavor important, dryness, or what? An A or B designation leaves many questions unanswered.

The same reasoning holds true for canned foods. Grade A tomatoes may be more whole, redder or riper than B tomatoes; grade A peaches may be larger or more uniform in size or packed in denser syrup than B peaches. But which grade of food tastes better and which is more wholesome? These are the crucial questions.

The question of wholesomeness can be disposed of quickly. The fact is that all canned foods offered for sale must be equally wholesome; neither industry nor government would permit any other kind of product to reach the market. The question of taste, on the other hand, cannot be disposed of at all. It is, to a large extent, an esthetic matter for which no objective standards exist. Deciding whether very young, young or nearly mature peas deserve the highest grade label is about like deciding whether Rembrandt, Titian or Cézanne merits the highest grade as a painter. But if the label on the can of peas states whether the peas are very young, young, or nearly mature, the shopper can decide which peas to buy on the basis of her own taste preferences.

As there can be no unanimity of opinion about flavor, the canning industry feels that it is unwise and misleading to establish or indicate what may be presumed to be general preferences. Most canners agree that it is more useful to state physical characteristics of products which can be objectively and scientifically measured and let each purchaser make her own selection. If the only difference between two cans of diced carrots lies in the evenness of the dicing, the terms "unevenly diced" and "evenly diced" describe the nature of the difference accurately. The symbols A and C do not; in fact, most shoppers probably wouldn't know whether the symbols refer to dicing or something else. By the use of descriptive labeling, canners try to tell the consumer exactly what she is getting when she buys a can or jar of food.

MISS SMITH: There are some things, like calorie count, that most labels don't mention. Is that mainly because of limited space?

STEELE: Limited space is one reason why a label can't go into full detail about everything. But there's another reason, too: some things are hard to pin down. It's true, for instance, that calorie content doesn't vary greatly from one can of tomatoes to another. Nevertheless, at the time of harvest, the natural calorie count and nutritive values of each batch of tomatoes may not be identical. To give accurate and legal nutrition information on canned foods labels, packers would have to analyze each batch of food they pack and vary their labels according to the results. Theoretically, this procedure could be followed, but it would be so costly that the price of canned foods would have to be raised.

MISS SMITH: You've told us a lot about what the canner's label should do for the consumer. I'd like to ask one more question: what should the consumer do to get the most benefit from the label?

STEELE: Two things, both of them simple. First, she should read it. Second, she should know what she wants. If she knows the size of her family, the use she intends to make of the food, her budget, and her family's tastes, she can be sure of buying exactly what she wants when she uses label information as her guide.

The Consumers' Interest in the Canners' Exhibit

By W. D. Lewis,
Executive Secretary-Treasurer,
Canning Machinery and
Supplies Association

We are delighted to see you here at the Canners Convention and it is a real pleasure for the members of the Canning Machinery and Supplies Association to have you as our guests at this, the 54th Canners Show.

Your guides this afternoon are members of the 49ers, a special group, and I might say, a very special group, as you will see, of supply representatives who have banded together to serve all state and regional canners conventions, as well as the national convention. They have completed more than ten years of outstanding service to the industry and we of C.M.&S.A. are most appreciative of their assistance.

You are all familiar with the old axiom, "Seeing is Believing." Exhibiting, although a highly specialized art, is primarily, then, just a form of communications. At its best, communications is the basis of advertising —the attempt to tell everyone about the products which you have to offer. Exhibiting is an ancient art going back to the time when mankind first began to barter. During ancient times, the market place and the large bazaars were so vital a part of the life of the community, that even now the movie spectacular uses such scenes to create atmosphere.

Although the basic principle of exhibiting has remained the same, the techniques of presentation have developed tremendously, incorporating all of the arts and utilizing all of the skills that industry has at its command. I can well imagine the early exhibit manager using a stick to mark off the earthen floor of the city square and then allocating an area to each vendor.

C.M.&S.A. Registration

The Canning Machinery and Supplies Association registered a total of 6,380 persons at the 1961 Convention. The total included 2,387 canners and other food processors, 3,023 machinery and supplymen, 255 brokers and buyers, and 715 others known only as "guests."

Coming back to our own times and exhibits, we should tell you that when you enter our exhibit halls, you will not see a complete canning line. If this Exhibit were designed for the general public, then we would show a canning line. But our conventioneers are canners who have been canning for 150 years and already have and know all about canning lines. These food processors are searching continuously for new machinery or improvements in existing machinery, new supplies and services, and information on newly developed techniques.

What you will see are machines that perform specific tasks and may be placed in existing production lines. You will also see various supplies which are used in production, and displays of services essential to production. Today, it is not enough merely to continue in the same way you have for years. The ever present competitive force demands maximum efficiency and quality.

Just as the canner has always brought out new food products and has increased production, the machinery and supplies industry has continuously improved on the various types of machinery, developed new production devices, techniques, supplies and services, thereby enabling the processor to constantly improve his quality and production and effectively meet competition. Industry statistics collected from the turn of the century show the importance of the machinery and supplies industry to the canner and his customer—the consumer.

Here's an example of the excellent canner-supplier relationship from 1900 to 1960. While the value of the canners' products increased from $100 million a year to $5 billion, the number of production workers increased from 57,000 to 175,000—a three-fold increase compared with a 50-fold increase in value of the product. If there had been no developments of machinery and supplies and we were still on the basis of 57,000 workers to produce 30 million cases as in 1900, it would now require over 1.33 million workers to produce the 700 million cases of food packed last year. Even if such a huge working force were available, and if the canning industry had to depend upon this

W. D. LEWIS

tremendous labor force to produce canned foods, the cost of the canned products today would be beyond the reach of a vast majority of consumers and we might be wearing canned foods around our necks instead of jewelry.

Research in the development of food processing—machinery and supplies —is continuous and many of the procedures talked about at this Convention will become standard practice in a few years.

The exhibit is located in two areas. Heavy machinery is downstairs and lighter displays are upstairs in the mezzanine and grand ballroom areas. There are 106 exhibits in all. The food processor, in much the same way as you, will find many refinements which can be added to the food processing lines. Each exhibit is staffed with trained technical representatives who have a full range of information about their company's products and services.

The 49ers escorting you will be more than glad to tell you about C.M.&S.A., the Exhibit (The Canners Show), and the Convention, and help you obtain full information about any of the machinery or products you see.

Again, may I express the appreciation of C.M.&S.A. for these few moments to talk with you. I hope that you have a pleasant and informative trip through "The Canners Show."

THE INSTITUTIONAL MARKET

PRESIDING: DR. HOWARD L. STIER, Director, N.C.A. Division of Statistics

ADDRESS: "Economic Pros and Cons of Canned Food Usage by Public Feeding Operators"—JAMES C. SCULLY, Executive Vice President, Nejelski & Company, Inc., and ROBERT L. JENKINS, Account Executive, Allied Food Services Corporation

ADDRESS: "Adapting Canners' Marketing Plans and Policies to the Institutional Market"—J. B. WEIX, JR., Oconomowoc Canning Company, Oconomowoc, Wis., Chairman of the N.C.A. Consumer and Trade Relations Committee

ADDRESS: "The Role of Canned Foods in the Future of Public Eating"—ORA D. CHIDESTER, Vice President, John Sexton & Co., Chicago

Economic Pros and Cons of Canned Food Usage by Public Feeding Operators

By James C. Scully, Nejelski & Company, Inc., and Robert L. Jenkins, Allied Food Services Corp.

SCULLY: If it seems surprising to see two of us on the platform, please do not ascribe the phenomena to the bad ice you might have had last night. The fact is that in preparing this report we came to believe that the viewpoint of the public feeding business is so important to you that we should present it as a separate commentary to our findings and observations.

We feel that there should be a voice speaking for the composite opinions of the volume feeding operators who cooperated with us in this study. Mr. Jenkins is that voice. What he has to say, we believe, is essential to a fully rounded presentation of the economic pros and cons of canned food usage in the public feeding industry.

As you may know, this report is based on findings developed from a survey of all of the principal types of volume feeding operations. This survey was undertaken as part of your Consumer and Trade Relations Program. It has been a full year in the works. Twice during 1960, through the medium of the *N.C.A. Restaurant and Institutional Bulletin*, we reported to you on certain aspects of our findings. George Anderson tells me that the demand for these two bulletins has been greater than for any other bulletins in the past. This demand has come not only from canners but from wholesalers and the public feeding industry itself.

It is clear that in examining all aspects of the comparative costs of using canned versus fresh or frozen fruits and vegetables we have been dealing with a subject of great current interest to buyers and sellers alike.

Obviously, in a study which involved a careful examination of buying practices, preparation methods, *labor* costs, recipes, menus and profits, we acquired a great deal of subsidiary information having a bearing on future food service practices, management problems and plans and probable buying practices. Some of this we will touch on this morning. A great deal more remains to be digested before it can be reported on usefully.

Let us set the stage with some essential background information designed to put this huge public feeding market into proper perspective.

This is a market composed of 35 categories of operations who serve an estimated 75 to 80 million meals a day. It employs approximately 2,800,000 people. It is the fourth largest retail market with estimated food and liquor sales of $17,000,000,000. Of this total, an estimated $14,000,000,000 is represented by food sales. It is further estimated that in 1959 all categories of public feeding establishments spent approximately $7,966,000,000 for the food supplies necessary to support these sales.

It is a concentrated market. Approximately 21 percent of the restaurants do 61 percent of this total business. More than 70 percent of this total business is done in 9 states. Indeed, 33.9 percent of the market's potential is to be found in 15 metropolitan areas.

Our study concentrated on the 12 principal categories generally considered to be the heart of the public feeding business. This group includes all types of restaurants, cafeterias, caterers, hotels, motels, drug, variety, and department stores.

In 1959, these 12 categories spent almost 72 percent of all the money spent by all categories of the public feeding industry on food supplies. In dollars this translates into over $5,725,000,000 spent for fresh and processed foods.

We estimate that approximately 68 percent of this total was spent for meats, fruits and vegetables, poultry, fish, seafood and dry grocery products used in the preparation of entree items alone.

This expenditure of over $4,200,000,000 represents a tremendous potential for the canning industry. Furthermore, it is a growing market but it is also in process of changes that can seriously affect the buying habits and operating practices of the entire public feeding industry within the next ten years.

The key to these changes is costs—rising costs that cannot be fully absorbed or passed on to the public by means of increased menu prices. Nor do these basic increases in labor, in building or in operating costs appear to be temporary. They are the result of the inflationary pressures that characterize our life and times. They can only be dealt with successfully by developing new food preparation procedures, serving methods and other cost reducing practices. The canning industry can play an important role in this search for profits in the public feeding field and will be well rewarded for its efforts.

As I have been roughing in this background a booklet has been put at your places. This booklet entitled *The Case of The Silver Lions* is designed to be read at your leisure but it will be useful to you this morning as a reference book. As Bob Jenkins and I discuss the role canned foods can play in reducing restaurant food costs we will have occasion to refer to some of its tables.

Bob, thanks for your patience. As the voice of the public feeding industry, tell me, why did we find so few operators with detailed or even adequate cost control information?

JENKINS: There are probably almost as many reasons as there are operators. It is only recently, since the National Restaurant Association sponsored uniform accounting methods, that we have had adequate and more nearly uniform accounting systems. No one has yet gotten around to doing the same for cost-control methods.

To most of us it has always seemed sufficient to know how much we spent in total for food and labor and all the other cost items. Until margins began to slip severely only the largest operators were cost conscious in the sense that most manufacturers are cost conscious. You might say we were profit-sensitive without too much cost curiosity. Most of us did not have the time or did not see the reason for a detailed cost analysis of all the items on our menu. We always had some idea of what menu items cost us. That "some idea" seemed to be enough.

On page 4 of *The Case of The Silver Lions* we show a cost analysis for Store No. 3.

SCULLY: Would you say that the profit history shown in this analysis is typical?

JENKINS: I think that many individual operators with a higher average check than the 60 cents Albert earns would show a much greater gross profit. But I think most would agree that profits have been slipping downward pretty much as they have for Store No. 3.

In many cases labor costs would have shown greater increases over the past three years. In many others overhead items would be taking a greater share of the sales dollar.

Naturally, there are widespread differences in labor costs. The highest labor costs are probably to be found on the Pacific Coast, the lowest in the south eastern states. In between the situation can be described as serious, but not yet desperate.

SCULLY: It seemed to us that one of your most serious labor cost problems is due to the low percentage of skilled help available and the extremely high labor turnover in many areas.

JENKINS: That is true but I do not think anyone accurately has measured what those items are costing us. Maybe it is just as well. If we knew, many might find it discouraging.

It is better that we take these problems in stride. Trying to find preparation and cooking methods that do not require highly trained skills is one way to lick the most serious element of the problem.

SCULLY: That is precisely why we believe canned foods can play a bigger part in your menu planning than ever before. Let us take the example of canned vegetables. I think that you will find some very compelling arguments on page 12 of *The Case of The Silver Lions*. You will note that we are dealing only with a selected group of vegetables but the same story can be told of many other fruits, vegetables and pre-prepared food items.

JENKINS: I think I am most impressed with the comparisons of preparation and cooking time. It makes me wonder why so many of us continue to treat canned foods as a sort of emergency ration. After all, we have been told many times and in many different ways that canned foods are convenience foods. But somehow it does not seem to mean much until we see it in terms like these where we can compare 3,250 hours of preparation time for fresh vegetables against the 62 hours and 5 minutes required to prepare the same number of portions from canned vegetables. This sort of comparison quickly translates into dollars and cents of profit. Somehow, telling us that canned foods are convenient is not quite enough. It is a little like telling a child to be good without attempting to prove its advantages.

All of us know from experience that shelling and preparing peas is an expensive operation. The same thing applies to kernel corn. As I see it the value of this kind of cost analysis lies in telling us how much it really has been costing us. I only wonder why more of us do not do this analysis for ourselves.

SCULLY: Then, let me ask you. Do you find the dollar cost comparisons between fresh and canned vegetables as shown on page 14 surprising?

JENKINS: In total, yes. I think I am a little like Albert. Subconsciously, I have always been aware that waste and shrinkage are important cost items but consciously I have lived with them as long as I could afford to. Now that I am looking for added dollars of profit, I'm aware that I need to change my habits of thinking.

Incidentally, have you figured the effect preparation and cooking labor have on portion costs?

SCULLY: Yes, we have. Indeed we prepared a table on this subject for the November, 1960, N.C.A. Bulletin. But since you may not have seen it, let me give you three examples figured on the assumption of labor costs at $1.50 per hour:

The first example: 100 pounds of beets yield 400 portions. They require 320 minutes to prepare and cook. The labor burden per 3 oz. portion is 2.0¢.

The second: 100 pounds of corn only yields 100 portions. It takes 140 minutes to prepare and cook. The resulting labor burden per 3 oz. portion is 3.5¢.

And the third: 100 pounds of lima beans yield 200 portions. They take an amazing 610 minutes to prepare and cook. The labor burden per 3 oz. portion in this case is 7.6¢.

I think you can see from this that there is more than one way to add to gross profits. I would like to point out also that these possibilities are not limited to vegetables. Canned fruits, canned meat specialities, canned fish and canned pre-prepared foods hold equal promise.

But we have not yet come to the end of the saving story. For skilled help at today's prices there are more useful things to do than hauling, cleaning,

JAMES C. SCULLY

peeling or scraping. If the energy and time applied to this work was funneled into salad making, baking and other important chores, not only would fewer people be required but those that remained would be more productive.

Furthermore, if you eliminate unessential preparation you can cut down on the space usually devoted to the classic job and use it to increase your selling or service areas. Only by trading preparation space for selling space can you hope effectively to met the challenge of increased land and building costs in desirable locations.

JENKINS: I am in complete agreement. Many of us have been working on this very problem. But, in experimenting with other types of convenience foods we have run into unexpected elements of storage cost. For example, just to install 71 cubic feet of freezer space will cost a little over $42 per cubic foot. If for defrosting or holding purposes we need additional refrigeration space this will cost us close to $36 per cubic foot. Do canned foods have an answer for that?

SCULLY: Yes. I believe they do. Dry storage space is the least expensive storage you can buy. In recently computing the cost of a storage area 21 x 6 x 7 feet, we found that the cost of shelving and uprights would be $634.50 or $1.47 per cubic foot. To this you might wish to add the cost of enclosing and ventilating a special area. Although this is never necessary unless cool storage space is lacking, it still would not increase the total cost to more than $6 or $8 per cubic foot.

As you look at the evidence, the case for canned foods is a compelling one. Yet, as our study revealed, few volume feeding operations use canned foods as consistently and completely as they

might. Public institutions are usually big users but private volume feeding establishments vary widely in their usage. With all the current excitement over convenience foods it seems to us that a lot of people have forgotten that canned foods are the most convenient of all. What do you think are the reasons for this?

JENKINS: In my opinion there is no one answer. Basically, I think attitudes are to blame. On one hand, the public feeding industry has inherited the traditional chef's distrust for anything that he does not prepare himself. He accepts canned foods but on a limited basis.

On the other hand, we get the very strong impression that canners take our business for granted. In my experience very few canners know at first hand what is needed by the public feeding industry. They refer to all of us under the collective title of "Institutions." They think we prefer #10 cans at all times and under all circumstances and somehow they have come to believe that we prefer price over quality. All of this might have been true at one time but it certainly is not true now.

SCULLY: What then is true. Let's take the subject of quality versus price. One of the canning industry's most convincing claims seems to me to be that modern quality control methods are your assurance of consistent quality which cannot be guaranteed by the usual kitchen cooking methods and practices.

JENKINS: I have no quarrel with the theory. I only know that to find consistent quality we have to be searching for it. We may be more critical than housewives but we cannot settle for much of what is offered to us.

If our consumption is average we search about looking for a reliable wholesaler—someone who goes to the trouble of selecting, policing and maintaining good quality and who will not hesitate to tell us the truth when quality is not available. If we are large buyers we are tempted to look around for small canners, specialists who will be interested enough in our business to deliver consistent quality.

The fact is that consistent quality is not a built-in virtue. In time all of us become cautious. Some of us become discouraged.

SCULLY: But is it not possible that your insistence on price concessions may have a lot to do with the quality you get?

JENKINS: I am sure there are some tough and even unreasonable buyers among us but I am equally sure they are in the minority. We are looking for bargains like anyone else but we do not put our emphasis there. You cannot build a following and a reputation on foods bought at a price. Quality must come first. We are willing to pay a premium to avoid production headaches, customer complaints, returned goods, and all the rest of the problems that come along as companions to cheaper prices and inferior merchandise.

SCULLY: If this is the case I can only wonder how it is that so many food suppliers make so much of your tough buying practices and insistence on bargain level prices.

JENKINS: I'd hazard a guess that if canners were closer to our actual needs and, at first hand, fully understood our viewpoint these stories would tend to fall into proper perspective.

SCULLY: I know what you mean. We have made some studies where we have had to watch closely the wholesalers' salesmen in action. Often in a competitive situation it seemed to us that the salesman's preoccupation with price was greater than that of the customer's.

JENKINS: You know, there is one sales gambit we hear more frequently than most sales managers realize. It begins with, "What are you paying?" and ends with, "I may be able to save you some money."

We really do not have to open up the price question. It is opened up for us. But I suspect that the salesman returns to his office with quite a story about how tough we are.

SCULLY: If quality is so important to you, how do you define it? It seems to us that it is a relative value. That is to say that the fast turn-over operation that sells a turkey dinner at 65 cents has an entirely different standard of quality than the atmosphere restaurant that sells a turkey dinner for $3.75 or $4.00.

JENKINS: In some respects this is true, but they are closer together in the matter of quality than the great differences in menu prices would seem to indicate.

I have seen the records and know that both will pay almost the same prices for turkeys on the same day. Part of the difference in menu price is purely a matter of margins. Another difference is the quantity served, the number of slices, the thickness of the slices and the amount of bread dressing and extras that are used. But both, if they are to be successful, must be concerned with flavor, texture and appearance. For everyone, these elements constitute the measure of quality.

SCULLY: If I understand, you are saying that successful public feeding operators at all levels of the market are concerned with the same quality factors. That even though a "meat and potato" man's flavor standards are not those of a gourmet, neither will settle for half measures for the sake of price alone.

JENKINS: Yes. That is correct. Success in our business is dependent upon good food. Unlike the grocer, we are under the gun from the moment the product is served. If the customer does not like what we serve we get it back, pronto!

If you look at the reasons for failure in the restaurant business, you will find that year after year close to the top of the list if not right at the top is one described as "Lack of Knowledge of The Business." Too often these are the fellows who mistakenly buy the inferior products that no successful, experienced operator would touch.

SCULLY: This insistence on quality by the successful operators seems to explain the sharpness of the criticism we heard regarding over-cooked vegetables and fruits, excess liquid, broken pieces and incorrect drained weight.

JENKINS: We try to be fair in our criticisms. We recognize that there are good crop years and bad ones. We also have enough production problems ourselves to be tolerant of those we are sure canners must have. But we object strongly when inferior products become the rule rather than the exception. When that happens, we stop using the offending products. It is pretty hard to get us back in line when that happens.

If I were to make some general criticisms in regard to canned fruits and vegetables they would be these:

In spite of all that has been written on the subject of correct labeling, the drained weight, count and product description too often are omitted.

Serious steps should be taken to eliminate over-cooking. Because cooking is our business we have some understanding of the problems involved but, because of this, we know also that it need not happen so frequently. We cannot use over-cooked canned foods. To protect our customers we often have to switch to frozen or fresh products. In some cases, freeze-dried or dehydrated products will fill the bill.

Appearance is important to us. When we buy top grades we do not expect to find broken or unattractive looking products. We realize that this problem is somewhat complicated by the fact that canners have very little control over private label sellers. Yet you must realize that we have our businesses to think of. If we cannot get good looking products from one source we will get them from another.

SCULLY: Bob, as the unofficial representative of the operators who cooperated in our study, I think you have clearly presented a synthesis of their collective points-of-view, attitudes and criticisms.

These seem to us to be important things to know just now. The public feeding industry we once knew is expanding and changing in many directions. In-plant feeding, vending, take-out foods all present opportunities to food suppliers seeking new avenues

of profit. Pre-portioned and pre-prepared foods are emerging from an era of experimentation into an era of broad utilization. New equipment, new preparation techniques and new food preservation methods make it possible to cook and serve restaurant meals in a manner never dreamed of before.

These elements of change have been a long time coming. Acceptance of new products and new ideas has been slow, but the economic pressures we spoke of earlier are now acting as a prod to action.

In this world of change, canned foods have an opportunity to increase their collective share of the market by millions of dollars and at a rate greater than the normal growth rate.

But this is not a static opportunity that will wait patiently to be seized. Competition from frozen foods, the improved handling of fresh foods, freeze-dried foods and completely pre-prepared entrees are things that cannot be ignored.

To make the most of this opportunity is not costly. Vast advertising expenditures are not required. The important factors are:

That nothing be taken for granted.

That past conceptions in regard to the restaurant business be re-examined.

That all the facts that are important to know about the use and care of canned foods be repeated over and over again. Food operators like most of us, have short memories.

That new adventures and recipes in canned food usage be encouraged, and that they be created for and tested by restaurant operators.

That canners cease to abdicate their selling responsibilities. Help the wholesalers by knowing where product lines fit best, where the better profit opportunities lie, what the quality requirements are. Know this giant market—the public feeding industry—for what it is and for what it is about to become.

Adapting Canners' Marketing Plans and Policies to the Institutional Market

By J. B. Weix, Jr.,
Oconomowoc Canning Company

There is probably no more difficult job than the one I have today; that is, speaking to a group in your own field. It is much easier to talk when you know more about the subject than most of your audience. That is certainly not the case today where many of you are actively involved in this marketing field.

Perhaps you are wondering how I was selected for this assignment. Your Consumer and Trade Relations Committee, of which I am Chairman, for the last year has been active in proposing that a part of our effort and funds be expended for publicity in the institutional field. There have been two reasons for proposing this course. First, many N.C.A. members are largely or wholly involved with the institutional market. Secondly, there are fashion leaders in the food field, and many fashions of eating are established when people dine out. If we can maintain a position of prestige for canned foods in the restaurant, we are helping the entire industry.

In approaching the topic of "Adapting Marketing Plans and Policies for the Institutional Market," I have broken this subject into three main areas and I will first speak of the easiest.

The Bid Market

This is easiest to determine policies, but perhaps the hardest to live with those policies. This is the "bid" market. Let us attempt, briefly, to determine the size of this market. The total of all foods purchased in the United States is estimated at 63 billion dollars annually. The restaurant institutional market is estimated at 17 billion dollars. Note that one dollar out of every four spent for food is through an institutional outlet. Of this $17 billion, the portion spent for fruit and vegetables in all forms is estimated at $900 million dollars. However, only 35 percent of these fruits and vegetables are canned. That is to say, the total sales for canned fruits and vegetables in restaurants and institutions is $315 million dollars per year.

Of this total only about one-third is procured through the bid system. The breakdown of these figures is 50 million dollars per year procured by the Quartermaster Corps. The second largest central buying agency is the School Lunch Program. It is estimated that the total purchases by schools amount to 65 million dollars per year. However, only a portion of this is procured centrally by the USDA. Central purchase has averaged about 15 million dollars per year. Nevertheless, many of the local school districts operate through a bid system also. Finally, we have the state government purchasing for the 1,140,000 people served by state institutions who buy approximately 25 million dollars of canned fruits, vegetables and juices. I will not vouch for the complete accuracy of these estimates; however, I believe they are adequate for our topic of adapting marketing plans and policies for this market.

The first and obvious conclusion is that in this bid market *low price* prevails. In our highly competitive industry there is apparently always somebody with a block of merchandise he is willing to unload at a price. Undoubtedly your reaction to this is a market we should avoid like the plague. Nevertheless, I am sure that there are few production planning departments that run so efficiently that they never come up with surpluses. Incidentally, I don't believe that the interests of our various government branches are best served by indefinitely maintaining the present bid system. However, under current conditions let us assume that this remains a low price market for surplus supplies and I think we can make some reasonable conclusions. Obviously you must know what quantities are surplus; or, in other words, you must have a forecast on requirements for other distribution areas. Naturally, we are all operating with forecasts, some very sophisticated and some very informal. I would make only one comment on this subject. In spite of limitations, a definite projection—both short-term and long term—is essential and at the end of the period it should be checked to determine where it went wrong.

With your broad policy strategy developed for selling in the bid market, I can only draw a few conclusions which are mainly concerned with operating methods. The individual or department charged with responsibility for selling to this market should be familiar with the company's sales forecast procedure and limitations. Secondly, he certainly should be familiar with national packs, supplies and market quotations. He must obviously work closely with the production planning people to permit flexibility during the canning season. I would conclude consideration of this market by stating that in this area a successful operation is essentially one of personnel. An analytical, realistic, flexible approach is essential.

Institutional Wholesaler

The second general category of the institutional market I would consider with you is the institutional wholesaler. The traditional wholesaler still thrives here, operating through salesmen, calling directly on a large number of customers, offering credit, service and delivery. This is a market where a small firm apparently can continue to operate effectively and successfully. Rather than any detailed consideration of selling policies for this market, I would just like to highlight two elements that would appear to me to be necessary for continued successful sales in this area. The first is the necessity of continued personal contact. Typically these firms have one buyer, usually owner or manager, who assumes this function, buys 1,000 items himself and has been in the position for many

years. Marketing plans and policies in this area should take cognizance of the necessity for the development of a personal contact with this buyer.

A second element that I feel is most significant is your general company reputation. I believe that for a firm to operate successfully in dealing with a number of the small institutional wholesalers, your company reputation must be sacred. For continued sales, your selling policies must be those that give recognition to fair play, reliability, particularly on availability of supplies, and the image of progressive good management. This market is a personal one. These men have too many items to buy to deal with any fast operators. Given proper treatment, their loyalties are long and lasting.

Evaluating Future Demand

I would now speak with you about a third category that should influence your marketing plans and policy. This is not a specific distribution channel, but rather a potential market. I am speaking of a demand —the demand for something better, something new. And so the question is, how well are our marketing plans and programs organized to supply the better products and services to meet this demand? Regardless of whether your firm has a sophisticated organization with specific departments in charge of new product development, process improvements, etc., or whether you are a one-man operator, part of your firm effort, I suggest, has to be in this area. If your company policy is only to copy successful efforts of others, your firm cannot make the same progress in total sales and net profit as your competitors. Naturally, of course, this does not mean that you should scorn plagerizing. Nobody can have *all* the *good* ideas, and generally a fast second place pays off pretty well.

But the question is, what about plans and policies for better products and services in the institutional market? I can offer you no specific solution or program. However, I have certain ideas on this I would like to bring out. I believe that either formally or informally, there should be some person or group in your firm charged with this specific responsibility on the development of improved products or processes. On such an important function, obviously many people in policy positions will be involved. Nevertheless, there should be one individual or department specifically charged with over-all responsibility in this area. Suggestions on a more convenient container, a new style of cut, a new combination of ingredients, new flavoring, might come from anywhere in your organization. However, unless there is a specific individual or department charged with bringing together the loose ends, testing out the possibilities, appraising

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the prospects, the chances are that you will be weak in the development of improvements in this area.

But where does such a department start from? What do they work on? Frequently there is a lack of knowledge on how the firm's products are actually used in consumption: how the products are handled, what they are used for, and the important factors in their use. I do believe that anyone supplying merchandise to the institutional market should develop at least one close relationship with a buyer for a cafeteria. After all, here the products are placed on display and there is a direct consumer choice. It has been my observation that cafeteria managers become very adept at recognizing factors affecting consumer preference. In contrast, I would also issue a word of warning about consumer taste panels. Written questionnaires are particularly a tricky technique to handle. The answer you get may not be at all related to the question you ask. And finally, I would issue a word of warning that the institutional buyers' salesmen, or suppliers very rarely seem to be helpful in spite of good intentions. In other words, first get to know how the guy in the kitchen uses your product, what he thinks about it.

There are a few things that are obvious that can guide our policies and plans in this area. Labor costs in the institutional food preparation or kitchen is a significant factor. Anything you can do to take labor costs out of food preparation will find a ready response. Just plain goodness of food is a most evident characteristic. Yet how few firms are set up to check the good plain eating qualities of their products? Innovation or creativity is still an art, but often it does yield to plain common sense. I have always been fascinated by the story of the development of shelley beans. As most of you are familiar, throughout the southeastern states for many generations the snap beans that were grown were fibrous; hence they were known as string beans. This was all that was available in the days before the development of our newer hybrid varieties. The only way which these green beans could be tenderized was to cook them for hours and hours and generally they were cooked with a piece of bacon fat for flavoring. Generally since the maturity of these beans was pretty far along, they had loose, well-developed seeds so you found in the Southeast a market demand for a product that looked like the old-time string bean. So someone smarter than I combined a shelled bean into the new tender hybrid variety of green beans to produce a product that was similar to the old-style green beans that people in this area were used to. This strikes me as being an excellent example of successful product development.

I would have one final comment to make in the area of innovation and improvement. Many of our processing changes made under the mantle of product improvement only result in improvements that are discernible to someone in the industry, a knowing buyer. I would suggest as a guide post in this area a phrase that is not original with me. When considering a new product or process, it should result in *demonstrable superiority* that is evident to the ordinary consumer. In other words, the improvement or the change should result in an improvement anyone can see. I believe that this one policy guide can prevent you from doing expensive development work on products that do not catch on and save you from going into expensive capital improvements that do not pay off. Furthermore, it may guide you to improved products that mean a more successful operation.

In conclusion of my consideration of marketing plans and policies for the institutional market, let me state that you cannot ignore any of the conventional marketing precepts. There is one major theme that is a subject all in its own that I would call your attention to. A survey by Dun's Review among presidents of corporations asking their opinion on the reasons for the success of the best-managed firms of the nation brought out the following. The firms selected had a total planned program with specific goals toward which they were working. They had a plan for the future. While in company management we cannot be wholly scientific, at least this planned approach toward the problem should be the major central part of your effort.

I have endeavored to touch on some of the factors affecting marketing

plans and policies for the institutional market which must be considered within a total marketing program.

Finally as I meet some of you calling on our common customers, let me say, "Don't do like I do, do like I say!" I wish you luck in your efforts. Certainly we can congratulate ourselves since we are all helping feed our people better than any other people at any other time in the world's history.

The Role of Canned Foods in the Future of Public Eating

By Ora D. Chidester,
John Sexton & Co.

Many of the canners know John Sexton & Co. For the benefit of some who have not had first-hand information, I would like to point out that the resources and efforts of this organization have been devoted to supplying the institutional market with the best the market has to offer for over 77 years. Canned foods are the largest portion of the business.

We have 10 distributing plants strategically located, and all do some manufacturing and packaging including the roasting of coffee and the packing of tea.

At our Detroit plant, we manufacture detergents and other soap and chemical products. We do not pack any food at this location.

We are members of the Indiana Canners Association and the major portion of our food processing takes place at Indianapolis. The items packed include soups, preserves, jellies, meat products, pickles and many other quality items.

John Sexton & Co. covers the entire country including Hawaii, Puerto Rico and Alaska. We have an export department for our foreign business.

Our efforts are directed to the needs of the restaurants, hotels, hospitals, schools, camps, industrial cafeterias, drive-ins, airlines, railroads and steamship lines. We do not cater to state or federal penal institutions. In general, we cater to the trade that feeds people who are eating out.

As regards the most effective sales techniques, we use salesmen to cover all accounts. This personal contact has proved successful. The salesman must be a constant source of information to his customer. He is in a position to handle any problem that arises in connection with the delivery regardless of the nature of the difficulty.

The sale of canned foods is implemented with a staff of qualified personnel who devote their time and effort to developing recipes and menus for the trade. This information is passed on to the customer through the salesman.

All of these activities are designed to increase the use of canned foods. In this way, we hope to keep open the doors of the trade to a continued and expanded use of the products of this industry.

To further promote the products of the canning industry, a large investment in advertising in the trade journals of the industry is carried on continuously. Four-color inserts are frequently used in many publications. These carry the story of items the canning industry packs.

A large portion of our advertising appropriation is devoted to our attendance at national conventions. Among these are the National Restaurant, National Hospital, National Hotel and many state and local shows. At all of these shows, large displays of canned fruits, vegetables and juices are available for those in attendance to see and taste.

I have outlined to you some of the things we do for the canning industry. All of these efforts cost us money to keep open the doors for your products. My future remarks cover items that you can do to help yourselves and the industry.

On the whole, the canning industry should be complimented on giving label allowances that are realistic. The few canners who have not recognized the importance of good quality labels are not doing themselves or the industry any good. Wholesalers, who do not use quality labels, should receive a label allowance that reflects the cost of the labels and not prove to be a price advantage.

There is a need for improved packaging for No. 10 tins. With all the progress made in packaging of No. 10's, cans frequently reach the customer with scuffed labels and dents.

End opening cases with divided end flaps are not the answer. Storerooms in a big portion of the industry are not as well lighted as they could be and the end opening case is hard to properly identify under such conditions. It is relatively easy to read a case end label but with the divided opening at the end, a printed label cannot be used. Overlapping end flaps on an end opening case that a label could be applied to, might be the answer.

The longer inner flaps in 6/10 cases used by a large number of canners has reduced the occasion of rim dents and scuffed labels, since the cans ride at the same level. Many canners, especially West Coast, had used a 250 pound test weight carton for their products a few years back. The improved case was not costly because the test weight of the carton was reduced to 200 pounds. This was not true of other areas of the country where the 200 pound test weight carton was used and to extend the flaps would add additional cost. The additional cost has kept a number of canners in other sections away from the better case. I can assure you that Sexton has good attractive cases on all the products we manufacture to insure the goods reaching the customer in good condition.

All West Coast canners have a 2 percent cash discount for draft payments. All canners should go to a 2 percent cash discount if the merchandise is paid for on receipt of invoice. Terms should be strictly enforced and all of your invoices should show your terms. If there is more than one term available, your trade should know what it is so they can evaluate the payment most advantageous to them.

The institutional buyer we service is quality conscious. I will dwell at some length on quality.

Over the past 13 years, the canning industry has increased productivity per man hour by 60 percent with an average increase of only 35 percent during the same period for all manufacturing industries.

This has resulted in maintaining a price level for canned foods that increased the acceptance of the various products of the industry. For a number of years, the efficiency not only kept the cost down but also resulted in improved products. More and more automation is in prospect but with it comes additional problems. Somewhere along the line, quality is being sidelined and I feel this is resulting in an actual lowering of the grades of finished products. To offset this move more supervision must be put on the sorting tables and lines where the fresh product must be checked to see that nothing is allowed to go in the can that will result in a lower quality.

The institutional buyer has responded well to improved items in the number 10 cans. Among these items in the fruit line are applesauce, pears, peaches and pineapple; applesauce, because it is now being produced by most canners with more thought given to proper blending, consistency, color and uniformity of sweetness. The few canners not doing this would do well to change their methods. Any poor merchandise being sold to institutions not only hurts the individual canner but all those in the industry. It is the poor product that discourages the buyer for the institution and frequently results in a change of product to replace the poor item received. This frequently makes it hard to get the product on the menu once it is taken off.

There has been some reluctance on the part of some segments of the institutional market to the use of canned pears. This resulted from the new peeling method for pears which did not improve the appearance of the

pear but did increase the canner's case yield per ton. Pears are one of the items where part of the savings resulting from efficiencies developed should be used to better the quality. Uniformity of texture of the product must be watched closely. Fruit being packed on the immature side may prove advantageous in additional case yields but it does not improve the acceptance of the finished product. By the same token, extreme care has to be used to avoid soft pears which are hard to handle by the customer. Mechanical picking, which is not far away, is going to make the control of uniform maturity very difficult and steps should be taken to develop either equipment or personnel that will take out both, under-ripe and over-ripe fruit.

The story of peaches is very similar to pears. Here again canners have increased yields per ton because of improved equipment. Mechanical harvesting of peaches, which is also not too much in the future, will bring on the same problems I mentioned about pears.

Pineapple canners were able to pack more slices of pineapple in a No. 10 can, and this has resulted in an increased usage by institutional customers. A change in count from 50 to 52 and 60 to 64 slices reduced the cost per serving without materially affecting the appearance of the slice.

All of the fruit items I have mentioned have had increased acceptance over the years by the institutional user and my remarks are designed to encourage you to avoid doing anything that will hurt this usage by the trade.

In the vegetable line, larger quantities of green and wax beans, beets, carrots, corn, tomatoes and tomato products are being used.

Green beans have continually increased in acceptance. The longer cut, the white seed and the improved flavor, especially of Blue Lakes from the Northwest, pushed this item into more and more usage by our customers. Strict adherence to a policy of close inspection on the sorting tables and lines are a must.

Beans must be well snipped and stuffing must be avoided. This is a production problem that properly handled will increase the acceptance of your beans.

There are a number of varieties of beans ideal for the fresh market that do not work well for canning. Beans that come apart with the least amount of handling should not be canned in No. 10's. Where seeds appear in the can or on the steam table, the beans lose their appearance and result in a rejection by our customers.

Wax beans because of their deep color and fine flavor have grown in acceptance.

Beets and carrots from areas of the country that formerly supplied fresh

ORA D. CHIDESTER

are now being canned. I refer to Southern packers who have done a good job and are enjoying an increased acceptance for their efforts.

Brighter color and better flavor has resulted in more acceptance of whole grain golden corn.

Cream style corn is the weak item in growth in the corn line. Cooking time for No. 10's has to be reduced and equipment must be developed that will do this. Some packers are doing a good job but the over-all improvement of the pack will increase the usage of this item by the trade. Small cans of this item have much better quality than the No. 10's. The institutional customer does not want to spend the time opening small cans to obtain a better product. He prefers to use some other item if the quality of the No. 10's is not satisfactory.

Increased usage of all tomato items, I believe, has been due to the increased promotion of products containing these items by the hotel and restaurant industry. Many of the Italian dishes so popular today use large quantities of tomato products. These are some of the items used by the institutional buyer to keep his food cost down.

If the entire canning industry treated their glut pack with the same tenderness and care that is being shown by those specializing in packing No. 10's, I am certain you would not have surpluses depressing the markets. It is the poor quality pack that constantly keeps the market in a bad way in years when you have large packs. I know the importance of getting the raw material into cans. Quality control is frequently overlooked in the haste to pack the goods. At this point, more inspection and checking is needed if you do not want to have a finished product that is detrimental to yourself and the industry.

An institutional buyer has a wide choice of foods from which to select. He will not serve a high priced item that does not have quality. If the quality is good, you have an opportunity to sell him. Poor quality goods receive very little attention regardless of price.

Substitutions for high priced products are continually being sought for by the institutional trade. In addition to increased consumption of tomatoes, macaroni, spaghetti, dry beans and rice have also increased. Soya products are frequently used with meats for extending them when meat is high priced. If the prices of pie fruits are too high, these frequently will be extended or even replaced by cake mixes that are easy to prepare and less costly.

Technical advances are the key to future improvement and a profitable operation. The canning industry can expect a big increase in the movement of canned foods through the type of customers we cover if they keep in mind this trade demands uniformity of product. By uniformity, I mean that the size of the item canned is close to being equal. For instance, a 30-35 count is much more desirable than a 30-40 count.

An example of uniformity would be a good Brix acid ratio on citrus products. Items that are blended should be on the same basis, for example, apple raspberry sauce should have the same color and flavor in each batch. Peaches and pears should have fruit of equal degrees of maturity. This uniformity applies to all products.

The institutional buyer wants full cans with proper drained weight. Drained weights are being checked very closely by the institutional buyer to see that they are receiving what they are entitled to. Averages are not accepted since individual cans are what they are inspecting. A canner's over-all pack might be good but it should be good in every can.

The institutional buyer wants good workmanship. Good workmanship shows the degree of control in the canning, such as beans being properly snipped, fruit being carefully peeled.

The institutional buyer wants flavor and proper color. Flavor is a prime requisite of any product and changes in operation should be weighted to determine whether or not the flavor is improved. The blends of syrup on many products should be checked to find out if the product can be improved by changing the blend.

All of this is possible with proper handling of raw product and close attention and inspection during the canning process. The success of the institutional buyer is dependent upon the quality he or she serves. Your success depends on giving them what they want.

TRADE PRACTICES—LEGISLATION AND REGULATION

PRESIDING: H. THOMAS AUSTERN, Chief Counsel, N.C.A.
ADDRESS: "The FTC Economic Inquiry into Food Marketing"—SIMON N. WHITNEY, Director, Bureau of Economics, Federal Trade Commission
ADDRESS: "Trade Practices Legislation—Some Philosophies and Prophecies" —JAMES ROOSEVELT, Congressman from California

The FTC Economic Inquiry into the Food Industry

By Simon N. Whitney,
Federal Trade Commission

Why is the Commission investigating the food trade? In October, 1958, almost a third of all pending complaints of restraints of trade, and of price and other discriminations were from this industry. The Commission, while continuing its many legal investigations, also authorized an economic inquiry into the facts. This inquiry began with concentration and integration in retailing; then moved to frozen foods and canning because of complaints from these particular areas, which are considered by some to be among the outposts of small business in the food field, and the feeling of many that the cause was the power of the large buyers. It may well move, if the new Commission majority still favors it, to other major branches of the industry: baking, cereals, dairy products, prepared foods, meat and poultry.

This is our first study of frozen foods, our first of canning since 1940. We have made more recent studies of coffee, copper, drugs, farm implements, fertilizers, and other industries. Ideally, there should be continuous surveys of each industry, to check its conformity to the letter and spirit of the national policy in favor of free competition.

The Bureau of Economics is not, however, large enough for such a full program of studies. We have at most 15 working economists and statisticians, although the newly introduced budget awards us five more, with perhaps 10 of the 15 momentarily available for the food study after allowing for those assisting on Commission legal cases. There was once a much larger Bureau, but the pressure on the Commission to enforce the widening range of its statutes has led to a rising proportion of lawyers to economists and statisticians.

An essential feature of our economic studies is the mandatory power to gather information. Private foundations and scholars, and other government agencies which make industry studies bearing on competitive performance, lack this power. Section 6 of the Federal Trade Commission Act gives us authority "to require . . . corporations engaged in commerce . . . to file with the Commission in such form as the Commission may prescribe . . . reports or answers in writing to specific questions, furnishing to the Commission such information as it may require . . ."

This authority has been used in all or nearly all of our economic studies since the statute was passed in 1914. Section 6 is also used by the Commission to collect the Quarterly Financial Report for Manufacturing Corporations, in whose sample there are always some canners. It has been used occasionally to produce evidence in anti-monopoly cases or in compliance.

There is a current extensive use of Section 6 in a legal investigation running parallel to our statistical one. That use is part of the Commission's all-out effort to enforce the Robinson-Patman Act, and to enforce it fairly and evenly on all. By Section 6 questionnaires, the Commission can investigate a whole group of competitors, not just one or a few who would then be at a competitive disadvantage. These questionnaires ask a retailer, for example, what special payments or "anything of value" he has solicited or received from suppliers, with names and addresses of these, or a supplier what special allowances he has given, and to whom.

The first phase of the current legal investigation came a year ago, when 113 suppliers of food products were asked what payments or allowances they had made to three chain store companies from whose books their names had been taken. A number of formal complaints were later issued as a result. A little later, 130 sellers of fresh citrus fruits received questionnaires, and widespread violations of the brokerage provision of the Robinson-Patman Act were unearthed. The Commission has made no announcement about the results of the 211 questionnaires sent in June to corporate, cooperative and voluntary chains. I cannot, therefore, comment on the story in this Monday's *Supermarket News* that "the number of complaints may eventually run higher than 400 or 500" since "the percentage of violations among retailers, it is understood, may run over 50 percent of those who received the FTC questionnaires."

The Commission lawyers have often used Bureau of Economics findings in their own cases and will probably study our new questionnaire results with this in mind. They had a hand in drawing up certain of our questions. Nevertheless, our questions were not drawn specifically to discover, without further corroboration, violations of the law.

CONCENTRATION IN FOOD RETAILING

Part I of our Economic Inquiry into Food Marketing, following the Commission resolution of October 9, 1958, consisted of questionnaires sent out to corporate chains of 11 or more stores, sponsors of voluntary chains, and wholesale establishments of grocery cooperative chains, in January, 1959.

The principal findings of fact, published in May, 1960, as a Staff Report, not a Commission report, were these:

1. Corporate chains of 11 or more stores, although their number declined from about 210 to about 180 due to mergers, increased their share of food store sales from 29 to 38 percent between 1948 and 1958 (it was more than 39 percent in 1960), and their share of grocery store sales from about 35 to 43 percent (nearly 45 percent in 1960);

2. Eighty-three chains acquired 2,500 stores in 1949-58 (three-quarters of them since 1955), and two-thirds of these were acquired by 10 large chains;

3. Twenty percent of the growth in sales of all chains from 1953 to 1958, and the same percent of the growth of the 10 largest chains, resulted from mergers (though much more of the greater gain in sales by chains than by other stores had this cause), another 20 percent was through growth of existing stores, and the remaining 60 percent came from opening new stores (note, however, that chains account for 75 to 80 percent of new supermarkets currently opened);

4. Retailer-owned cooperatives accounted for an estimated 8 to 9 percent of all food store sales in 1948, and 15 percent in 1958, while stores sponsored by wholesalers were an estimated 14 and 18 percent in these years—a greater gain by these groups than that of the chains;

5. This leaves for unaffiliated independents less than 30 percent of food stores sales in 1958, as against nearly 50 percent in 1948, while almost 100,000 one-store grocers went out of business in that period;

6. Corporate chains procured only about 3 percent of their 1958 supplies from service wholesalers, 3 percent from affiliated wholesalers, 8 percent from their own plants, and 86 percent from producers and processors.

7. Four-fifths of the 8 percent self-manufactured consisted of bread, coffee, meat and dairy products (28, 18, 17 and 16 percent, respectively), with frozen and canned products only 8 percent of the total;

8. The 8 percent of self-manufactured products was down from about 10 percent in 1954, so that, even after adjusting for the lower price of coffee in 1958, there was a slight drop in the degree of vertical integration in that period.

This first phase of our study having established the degree of concentration in food retailing, the Commission determined next to study the impact of such concentration on others. Processors, of course, would be in the first line of such impact. It did not seem fruitful to discuss the impact on consumers, since, in spite of an increase in the average gross margin of corporate food chains from 17 to 18½ percent between 1954 and 1958 (reflecting in large part increased advertising, and to a lesser extent real estate costs, payroll and profit), the consumer appears to be well served by the supermarket industry. A few complaints of large retail buying power had come in from farmers, but more than 50 letters addressed to farm organizations and sellers of farm products brought no clear and specific evidence of abuse of buying power, and no real enthusiasm for such a study.

The findings I have given you from Part I of our Economic Inquiry were statistical. We did not feel that we were in a position to make policy recommendations, but this gap has not remained unfilled. The recent report of the Distribution Subcommittee of the House Select Committee on Small Business has made extensive recommendations derived from the facts on concentration in food distribution. Any reader who may disagree with its recommendations can probably satisfy himself from the minority report. We have not had a majority and a minority, or in general the resources and the freedom, to steer into these waters.

For example, we have not said whether we think vertical integration by chain stores—the 8 percent of self-manufacture which we found—is "good" or "bad". To determine this would have called for a very extensive field survey, which I think our travel allowance of $4,000 would not have supported.

The Congressional report said some kind things about our first study, though regretting the absence of recommendations. I can recall only one significant point on which it criticized

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our factual findings, and the difference is not, I think, very striking. Was the share of the corporate chains in the Denver food market 60 percent, as we claimed, or 84 percent, as the Subcommittee did? In Bridgeport, 51 or 76? In Atlanta, 48 or 64? Our lower figures were based on reports to us by the chains, the correctness of which we did not otherwise check, and their higher ones on market surveys in which shoppers were asked where they bought most of their food. Whichever method is better, both show that there is a much higher concentration of food store sales in individual cities than in the national market. This, after all, must inevitably be so. It is unfortunate that we cannot make (so I believe) a successful statistical estimate of the shares in local markets within a city; but in the end I think we would find consumer alternatives everywhere.

In the current Bureau of Economics studies of the food industry, much was learned from the hearings of this Subcommittee. For example, they disclosed many instances of varying discounts and allowances received by chain store companies from canners. To show actual illegality, it would be necessary to find out whether these allowances also differed as between competing customers buying for resale to whom the same supplier sold at the same time. This would require further investigation, and not of a kind that our own Food Study is making.

Canning Industry Survey

Our questionnaire to the frozen food producers, sent out August 26 with something over 60 days allowed for preparation of replies, received excellent cooperation in most cases. There are still some gaps which are being filled in. I shall present preliminary results at this meeting, since I know many of you are in this field as well as canning.

The canners' questionnaire was dated October 19, and due back December 31; but only a minority were able to get answers in on time. We have given extensions to February 15, after which we plan to tabulate the returns, and may therefore have to ask the Commission for some default notices to those in arrears.

A few points related to answering the questionnaire may be worth emphasis:

1. The questionnaire must be answered (there is a fine of $100 a day for not answering after receipt of a default notice) by any corporation in interstate commerce (something which lawyers say applies to almost every seller nowadays);

2. It must be answered in full. We are requiring more complete answers, with extra trouble to them, from many canners whose returns have been received, and I would like to add that the questionnaire was much reduced in size before going out, compared to what our own statisticians wanted;

3. You are allowed to estimate where necessary, if you do not distort;

4. We do not plan to publish any trade secrets or confidential material, although the Commission has the power, which it rarely exercises, to make public anything except trade secrets and names of customers.

Our special interests in this questionnaire include in fact everything in it, but I'll mention specifically:

1. The degree of integration back to the grower;

2. Mergers and concentration;

3. The breakdown of sales by customer classes—if you cannot give this, and only your sales agent can do it, you should name your sales agent;

4. Sales promotion plans—we consider them a normal form of competition, but they must conform to the requirements of law, which the Commission has attempted to sketch in its Guides for Advertising Allowances, which you may obtain by a postcard to the Commission.

I should add that we expect to send out a shorter questionnaire to frozen food distributors this spring.

Frozen Food Survey

The Bureau of Economics is issuing this week its Interim Report on the frozen food study, as a staff report to the Commission. It includes only nine of the many tables which will be in the final report, and the figures in all nine are subject to possible revision. I shall now summarize them in order:

1. The merger movement is active in frozen foods as elsewhere. From 1950 through 1959, 27 producers made

acquisitions of others to the extent of $140 million in assets; and six acquired $9 million in farms, orchards and groves. There was a small offset in the shape of disposal of $17 million in processing facilities by nine freezers.

2. Fifty-four of the 74 facilities involved in 64 acquisitions were acquired in the last five years of the 10-year period covered.

3. Individual, independent growers were the direct source of at least 72 percent of the produce consumed by freezers for each vegetable covered in our survey, and of 78 percent for strawberries. The exceptions were oranges, only 31 percent; and other fruits and berries, only 48 percent. Only in these two did growers' cooperatives play a major role as suppliers of raw produce or as frozen food producers—38 percent for oranges, and 45 percent for strawberries. The cooperatives' shares elsewhere were between zero and 16 percent. Integration into farms owned by processors ran low and fairly even, from 5 percent for potatoes to 13 percent for spinach.

4. The young frozen food industry shows the considerable concentration one finds in older and larger manufacturing industries. The 10 largest producers accounted for 54 percent of total sales in 1959 (the average manufacturing industry in 1954 would have shown over 60 percent according to Census data); the 30 largest accounted for 75 percent; and the 50 largest for 84 percent. This left only 16 percent to the remaining 208 firms answering the questionnaires.

5. The questionnaire asked for the percentage of total sales which went to any of the 10 largest food chains. Eighty-eight out of 242 producers for which data are now available made no sales to such chains; the other 154 sold an average of $1 million each to them. Eighty-one sold less than 20 percent of their own sales to these outlets; 50 sold from 20 to 50 percent; and 23 sold from 50 to 100 percent. The 23 also, as it happens, averaged sales of $1 million each to the chains.

6. Each of the 10 chains bought at least 82 percent of its frozen fruits, juices and vegetables from producers who sold it less than 30 percent of their sales. In fact, three chains bought 99.8 percent or more of their supplies from producers selling them less than 10 percent of the producers' total sales. In this industry, the really captive producer tied to the apron strings of a single buyer is a rarity —only two chains bought (3 and 4 percent of their supplies, respectively) from producers selling them more than half of their total output.

7. Of $692 million sales reported by brands, 68 percent consisted of the packer's own brand, 26 percent of the customer's brand, and 6 percent was unbranded.

8. Most producers, as would be guessed from these percentages, sold mainly packer-brand frozen goods—38 percent sold 90 to 100 percent of their sales under their own brands; 16 percent sold 50 to 90 percent thus; 33 percent sold 1 to 50 percent; and the remaining 13 percent did not have brands of their own.

9. Of the sales of the freezers to the 10 largest chains, 57 percent are under the customers' brands. Of all other food distributors, only 16 percent are under customer brands. On sales to manufacturers (including bakers), 26 percent are of customer brands, 36 percent are unbranded, and the remaining 38 percent are packer brands.

It will be interesting to see how far the canners repeat the patterns shown by the freezers. We are also interested in the apparent fact that a substantial percentage of those reporting frozen food production in 1959 indicated that money was lost on this operation. If possible, we shall study this state of facts and its causes.

My own observation is that the frozen food business is generally competitive; from what I hear the canned foods business is generally competitive also. For suggestions as to further legislation to strengthen competition, I shall defer to the next speaker.

Trade Practices Legislation—Some Philosophies and Prophecies

By James Roosevelt,
Congressman from California

First, I would like to say that it is a pleasure to attend and participate with you in this the 54th Annual Meeting of the National Canners Association, and also the 54th Annual Meeting of the Canning Machinery and Supplies Association. You are to be complimented and congratulated upon your selection of your very capable officials and for the service that they have rendered not only to the members of the National Canners Association, but, also, to the thousands of members of the canning industry.

It is of considerable interest to the members of the House Small Business Committee that your Association and its officials have expressed concern about small business problems in the food industry, and a desire to learn more about those problems. As Chairman of the House Small Business Committee's Subcommittee No. 5, I have had the opportunity to learn something about small business problems in the food industry. As you probably have heard, I had the honor and pleasure of presiding over hearings and directing investigations, and the preparation of reports relating to small business problems in the food industry.

Less than one month ago, the House Small Business Committee submitted to the House of Representatives a report by Subcommittee No. 5 on "Small Business Problems in Food Distribution." That report is technically referred to as House Report No. 2234, 86th Congress. We who participated in and had responsibility for the work evidenced by that report find satisfaction in what we did in preparing and submitting it. It brings into focus matters that not only command your interest, but which also, obviously, are important to you in the day to day conduct of your business. Likewise, that report brings into focus some philosophies and some prophecies regarding legislation touching trade practices in the food industry.

The philosophy underlying our antitrust laws and federal legislation prohibiting unfair trade practices, decrees a private, competitive enterprise system. As recently as July 18, 1958, when Public Law 85-536, the Small Business Act, was approved, Congress reaffirmed our public policy against monopolies and unfair trade practices, and gave further expression to the philosophies to which I have referred. In doing so, it was stated in Section 1 of that law that

"The essence of the American economic system of private enterprise is free competition. Only through full and free competition can free markets, free entry into business, and opportunities for the expression and growth of personal initiative and individual judgment be assured."

This declaration was not to preserve and protect economic freedom and economic freedom alone. It has been abundantly clear that the maintenance of political freedom can be assured only through the maintenance of economic freedom.

All through the history of business enterprise, it has been accepted as self evident that personal and political liberties thrive in those areas where economic freedom is protected and preserved. From this concept has arisen our determination to preserve and protect economic freedom of individuals and businessmen and, thereby, aid the insurance of personal and economic freedom for individuals. That is one way of stating the philosophy and the purpose of our federal legislation against monopolies and unfair trade practices. In the Small Business Act of 1958, it was stated that

"It is the declared policy of the Congress that the Government should aid, counsel, assist, and protect, insofar as is possible, the interests of small-business concerns in order to preserve free competitive enterprise . . ."

Good, sound reason underlies that public policy. All of us recall clearly the importance of small business to our war effort. Countless small business firms produced parts of machine tools and many small machines which were vital to the production of great weapons in large volume, essential to victory in World War II. Small business, no less today, forms a large part of the broad base upon which our economy is founded in producing what is necessary for the defense of the free world.

Our friends abroad have discovered that our secret weapon, which enabled us to outproduce the world during World War II, was our private enterprise system of free competition, to which small business is so essential. Our friends abroad have not only discovered that fact—they are benefiting from their discovery. Many individual and small business firms have blossomed and grown in West Germany. This has helped the economy of that country, as it has the economy of other countries of the Free World.

Reports from Bonn, Paris, Rome and London, reprinted in the July 11, 1960, issue of the *U. S. News and World Report*, appear under the title, "Why Europe Keeps Booming: World's Biggest Success Story." Underlying that story are statistics so dramatic that they are almost startling. In the total output of goods and services per person, they show that Western Europe in 1959 enjoyed an increase of 5.1 percent. The United States enjoyed an increase of only 4.9 percent, while Soviet Russia followed with only 4.1 percent.

These statistics demand our attention, not only because they show what independent business firms can do and have done to help the economy in Western Europe, but, also, should serve as a warning to us that we are not keeping pace. Our economic growth is not at the rate it should be or at the rate it has been in past years. Is this because we are beginning to neglect our private enterprise system of free competition, and its essential ingredient, small business? There is need to ponder the situation in which we find ourselves before we undertake to answer that question. We should study the facts. Our answer should be objective, unbiased and without the pushing, hauling and tugging incident to the desires of those influenced or controlled by special interests.

Neglect of small business is expensive. The cost of this neglect first falls on the shoulders of the business firms, and later, on the economy of the country. We are now witnessing the cost to business firms. It is in the form of loss of profits and in higher taxes.

Continued loss of profits usually produces one of the expected results—business failures. You, as representatives of business firms, have watched closely Dun & Bradstreet reports.

What are the records about bankruptcies? In the fiscal year ending June, 1960, 110,034 bankruptcy petitions were filed in the United States courts. This was by far the largest number in the history of the country. In fact, almost twice as many firms and individuals were bankrupt last year as in the peak depression year of 1932.

We have heard many reasons advanced for this large number of failures and bankruptcies. Some say bad management is the principal factor. Others say lack of opportunity to secure adequate financing is a leading factor. We have evidence that many failures, bankruptcies and discontinuances have occurred because the use of certain trade practices denied fair opportunities to business firms to survive and prosper.

The Federal Trade Commission noted in 1958, with reference to the food industry, that "There have developed tendencies to concentration of economic power, to collusive price action, and to unfair competitive methods." In that connection, The Honorable John W. Gwynne, then Chairman of the Federal Trade Commission, in announcing that the Federal Trade Commission would study the situation, stated:

"We want to know why the industry is getting so tough for the smaller operator. * * * The trend seems to be to eliminate the small man entirely."

With this backdrop of declared public policy, facts and circumstances regarding the deleterious effects flowing from the use of alleged unfair trade practices, the House Small Business Committee assigned to its Subcommittee No. 5 the task of studying small business problems in the food industry. That is when I came into this as Chairman of the House Small Business Committee's Subcommittee No. 5. Therefore, when the program of the House Small Business Committee during the 86th Congress was announced on March 17, 1959, we outlined a course of investigation and study of small business problems in food distribution. In furtherance of that program, we undertook hearings, commencing in Washington June 22, 1959. Before the conclusion of that series of eight days of hearings, witnesses had been heard from every segment of the food industry. These included representatives from food processors, chain stores and co-ops, from frozen food people and poultrymen, from wholesalers and retailers, and from farmers. The government agencies gave facts on how many retail grocery stores there are and how much money is spent in them. From all of this information and the records of subsequent hearings in San Francisco, Calif., and Denver, Colo., a broad picture of small business problems in food distribution developed.

It was upon the basis of this vast array of information that H. Rept. No. 2234, 86th Congress, on the food industry, was prepared and submitted December 27, 1960. That Report took into account our philosophy and public policy providing for a free and competitive enterprise system. In doing so, we were mindful of the declared policy of the Congress that the government should aid, counsel, assist, and protect insofar as possible the interests of small business. Consequently, on the basis of what we learned about small business problems in the food industry, we recommended legislation regarding trade practices.

Congress does not legislate in a vacuum. Its committees hold hearings to develop the facts on which legislative remedies, where needed, must be formulated. Its committee staffs endeavor to assemble all information available in government departments and likewise draw upon all reputable trade sources, such as the publications of the National Canners Association.

In preparing for our hearings before Subcommittee No. 5, we studied a large mass—indeed about 2½ tons—of documentary material relating to the food industry and its buying practices. We learned much from that mass of information.

There is little doubt that the American food industry is not only vital to our national well-being, but it also is of vast proportions. Its aggregate current volume is probably well over $61 million.

The Subcommittee Report points out that measured against 1947 there has been a very considerable drop in the farmer's share of the consumer food dollar. Of the remainder, the proportion of the consumer's dollar that goes to what we call the "marketing system," including labor and transportation, now receive large shares.

One of the Report's conclusions is that the largest part of the increase in the marketing system share is accounted for in the gross retail markup. In other words, the changes in the ten-year spreads cannot generally be laid at the door of the producers or food manufacturers and processors.

As far as the canning industry is concerned, I have been informed that in the same ten-year period, 1947-58, the price of canned foods to the consumer increased to a far lesser extent than all foods in the market basket.

The BLS consumer price index of 100 for the base period of 1947-48 had risen to 123.5 by 1958. In the same period the index on items other than food had risen to 125.5. The index on all food items had risen to 120.3.

The index on canned food items by 1958 had risen to only 110.8 or only about half as much as the increase in the prices of other food items.

To a considerable extent, this splendid record undoubtedly reflects technological improvements in canning and better efficiency on the part of canners. That must be true because it is well known that the things you buy—apart from the raw agricultural products—cans, boxes, machinery and all other necessary supplies—have increased in price to a far greater extent during the same period.

On the other hand, it has been our task to discover whether any unfair trade practices exist in the marketing of canned foods which injure the public and the canning industry, particularly the smaller enterprises.

In our Report, we devoted considerable space to certain West Coast buying practices in the purchase of canned fruits and vegetables particularly on what the Committee learned is called "California Street."

I would be the last to say that in our brief hearings and investigation thus far, we have yet gotten to the bottom of all of these problems.

Nor shall I rehearse the data and preliminary conclusions about what is going on in this key canning state—indeed the largest in volume of production—because I am confident that it will be closely studied by each of you.

There are, however, a number of comments that I might venture on the broader pattern of competition in the hope that they will be of interest to those of you who are spending your business lives in this ruggedly competitive and nationally important processing industry.

The first has to do with what might be called the bottleneck of present day food marketing—shelf space. In our Report, we noted that some food manufacturers and processors have expressed deep concern over the development of private label buying by large chain food retailers and the impact of that expanding practice on the future of your industry.

We have ventured the preliminary conclusion that this may be a questionable area and that some processors have found it necessary to yield to these demands for private label merchandise at the expense of their own brands, for which they have achieved hard-won consumer acceptance.

As we say in the Report about the struggle for shelf space:

"This is a matter of growing concern for food manufacturers, processors and others because control of shelf space is control of the marketplace, and the denial of a nationally advertised brand of a food manufacturer from that shelf space is a denial of that brand of access to the marketplace."

JAMES ROOSEVELT

That should not be altogether a novel conclusion to canners. Your Association has been alert to the basic problem of shelf space for more than five years. It has made some of the most illuminating analyses of the retail sales of canned foods ever conducted by any organized trade group.

But one does not need statistical analysis to penetrate the economic dangers about which many are concerned. In present-day self-service food marketing, the only access to the consumers is through the retail shelf. Shelf space is as limited as are the broadcasting channels on the airways. The man who controls the allocation of retail shelf space in large measure controls what may be marketed.

It is true that in the research of your Association it has been demonstrated that the retailing of canned foods is profitable—that they more than carry the rent and contribute to the profit per foot of available shelf space. It is also true to some extent that advertising contributes to rapidity of turnover and dollar return per foot of shelf space. Nevertheless, the inherent desire of a large retailer, particularly a chain, to feature its own private brands, to expand their display and contract that of others, and particularly to do so in a vast number of commonly controlled retail units, presents a serious problem to all segments of the food industry.

It is basic to our American antitrust philosophy that no practice should be permitted which restricts the opportunity of people to compete. Access to the marketplace is essential if free competition is to be maintained. I can assure you that the Committee will continue to pay close attention to that vital and basic premise in food marketing.

Inescapably tied into it is the question of advertising. Further investigation may reveal all of its ramifications. In that part of our Report relating to canned foods, we indicate that we have already discerned some signs of pressure by large buyers for unwarranted, and often illegal, advertising allowances. Where advertising allowances are exacted, and the money is not effectively spent, or perhaps not spent at all, it is obvious that a canner selling his own brand can be economically hurt.

There is another facet of this same problem that so far as I know has never been explored. Where a canner attempts to advertise his own brand, nationally if he can, or even regionally, he almost invariably has to pay the national rate. On the other hand, the local retailer is usually afforded a far more advantageous and considerably lower local advertising rate. If the advertising allowance exacted from the canner on his own brand goods is effectively spent, he gets some value from his allowance even under existing dual rate structure in advertising.

But where a large chain organization advertises its own private brands, and in doing so can get in each retail market the benefit of the far lower local advertising rates, it hardly can be denied that for the same advertising budget the chain store private label buyer can get almost twice the advertising mileage that the canner can get. It is for that reason, among others, that the Committee is so interested in mergers and concentration in food retailing.

Some of you may have wondered why both the Federal Trade Commission and our Subcommittee No. 5 have simultaneously conducted investigations. There may be some who regard this as an unnecessary burden upon the food industry.

We are not unaware of that natural question. We have no desire unnecessarily to burden any businessman with questionnaires or hearings or subpoenas.

But as pointed out in the Report, the Subcommittee has, to some extent, different interests and, in many ways, a different emphasis in its inquiry. We are most interested in the broad picture. We can and do travel, and in Committee hearings can interrogate witnesses. A face-to-face presentation is often more illuminating than a mass of arid questionnaires. Possibly most important, it enables members of the Committee to learn at first hand what is going on and not to deal solely with statistical summaries.

In saying that, I do not mean to deny the value of a well-conducted economic inquiry by the Federal Trade Commission, or in any way to deprecate Dr Whitney's efforts. I simply suggest that the two types of inquiry are complementary.

Inquiries conducted by the Federal Trade Commission under Section 6 of the Federal Trade Commission Act, leading to reports on economic problems, provide Congress with information to assist it in its consideration of need for additional legislation. Nevertheless, there is need for Congress to look at these problems directly and study them at first hand. I have pointed out why that is desirable. It is believed that you as businessmen would not want Congress to act upon the basis of second hand information alone and without more. It is for these and other reasons that our Subcommittee No. 5 made its study of trade practices and conditions in the food industry.

The Committee is likewise not unaware of some of the realities of economic life. Experience has taught us that a canner who sells the bulk of his production to several large buyers is likely to be loathe to criticize the buying practices of his principal customers. It is not necessary to go to the point of charging that intimidation or coercion may occur in some instances.

We are not entirely unsympathetic to that problem. Nevertheless, the Committee's job is to get the facts. If necessary, we do resort to our subpoena powers. We prefer that witnesses volunteer. If we ever encounter a situation where there are demonstrated reprisals against anyone who appears before the Committee, we will, as I said in San Francisco, refer the case to the Department of Justice for prosecution under the applicable statute.

Nevertheless, the Committee desires to hear both sides of every case. It is not in keeping with the American spirit of fair play to base legislation upon anonymous charges. If there is a complaint that Company X has been engaging in coercive practices, we feel it imperative that Company X be permitted to answer the charges.

I do not pretend to know how this real problem, particularly in the intensively competitive canning industry, can be resolved. As our Report points out, in some areas there are a large number of small canners, and only a limited number of buying representatives. We do not insist that anyone commit commercial suicide. We can only suggest that it is in the interest of all concerned that the true facts be forthrightly and fearlessly given to the Committee.

Having discussed with you philosophies and public policies underlying our legislation regarding trade practices, and some of the information about trade practices in the food industry, we should now turn our attention to prophecies regarding these problems and legislation.

The food report made by our Subcommittee No. 5 contains recommendations for new legislation and for a step-up in the enforcement of existing laws regarding trade practices. Briefly, we recommended that the Department of Justice, the Federal Trade Commission, and the Packers and Stockyards Administration be provided with greater resources and otherwise encouraged to bring about more expeditious and effective enforcement of existing antimonopoly laws.

Also, we recommended new legislation to strengthen existing antimonopoly laws to provide relief from the injurious and unfair competitive practices we found to exist in the food industry. Specifically, we recommended legislation which would strengthen our antitrust laws to prohibit discriminatory pricing practices and a strengthening of the antimerger laws.

Among our recommendations was one to strengthen the law against large buyers inducing and knowingly receiving unjust and injurious price discriminations. The present prohibition in that regard is contained in subsection (f) of Section 2 of the Robinson-Patman Act. It has never been effective. Congress inserted that provision of the law to remove the unwholesome pressure that large aggregations of economic power in the hands of nationwide retailers exert upon less powerful sellers. Too often the Federal Trade Commission, in the enforcement of the Robinson-Patman Act, ignored that section of the law and turned its guns on small canners and other food processors. However, we in Congress are mindful of a decision by the Supreme Court of the United States in the famous Automatic Canteen Co. case, which placed severe limitations on the powers of the Federal Trade Commission to proceed against large, powerful buyers who unjustly used their economic power in coercing price discriminations from less powerful sellers. These are among the reasons why our Subcommittee No. 5 recommends a strengthening of that subsection of the law. Consequently, The Honorable Wright Patman, Chairman of the House Small Business Committee, I, and a number of our colleagues, have introduced legislation on this point. The bill introduced by Mr. Patman is H. R. 124.

The General Counsel of this Association has repeatedly and plaintively asked, in his public addresses and writings, the paradoxical question why laws designed to curb buying abuses are written in the form of imposing restrictions on sellers. The additional pertinent question has been asked, why do enforcement agencies, in proceeding against price discrimination practices, ignore coercive and abusive practices of large buyers and proceed, instead, against sellers, even where the law provides for proceedings against buyers?

In large measure, who should be proceeded against is a function of law enforcement. Where it is found that a group of sellers have been economically coerced into violation by one or more large buyers, it might be better law enforcement for the prosecuting agencies to proceed against the buyer, put him under legal restraint, and thus directly go into the root of the evil.

You are assured that our Subcommittee No. 5 has not overlooked this aspect of the problem. Further study will be given to it. It is hoped that the proposed legislation to which I have made reference will help. In the meantime, you as representatives of an important segment of the food industry are in a position to help. Your advice, counsel and support for legislation to strengthen the laws against unfair and discriminatory practices undoubtedly would be hailed by all who sincerely seek better conditions for the food industry. Also, your interest in the promotion of fair competitive practices in the food industry may be enhanced by contributions toward more effective enforcement of existing laws against unfair trade and discriminatory trade practices.

In conclusion, I wish to say that my participation with you in this meeting of your Association has been pleasing, stimulating and inspiring. Thank you.

FOOD SCIENCE SESSION

PRESIDING: C. L. RUMBERGER, H. J. Heinz Company, Pittsburgh, Chairman, N.C.A. Scientific Research Committee

ADDRESS: "Food Technology Around the World and Its Contribution"—DR. K. F. MEYER, Director Emeritus, George Williams Hooper Foundation for Medical Research, University of California, San Francisco

ADDRESS: "Modern Trends in the Nutritive Quality of Food Supplies Here and Abroad"—DR. CHARLES GLEN KING, Executive Director, The Nutrition Foundation, Inc., New York City

ADDRESS: "Foods Are Chemicals"—DR. EMIL M. MRAK, Chancellor, University of California, Davis

Food Technology Around the World and Its Contribution

By Dr. K. F. Meyer,
Hooper Foundation for
Medical Research

The title of this address is definitely embarrassing because the speaker is not an expert in food technology, and his wanderings over the globe were primarily in the interest of disease prevention. However, as a member of committees of the World Health Organization, he keeps in mind that the constitution of that body defines health as a state of complete physical, mental and social well-being. Good nutrition contributes to the attainment of this state, so that the title "Food and Health" might better suit the material to follow.

Food is a fundamental health promotive factor. Without an optimal diet a healthy inherited constitution cannot be developed or maintained. Brock, the eminent professor of medicine and student of nutrition in South Africa, has shown this interdependence in a diagram of the relationship between genotype and environment, both favorable and unfavorable, in determining the development of constitution and life expectancy, and of experiences of health and disease.

A map recently published by the Chief Statistician of WHO, Dr. Satya Swaroop, leaves no doubt that undernutrition and malnutrition are responible for much of the world's ill health. But in many well-developed areas, the lack of enough food and of the right kind of food are further complicated by debilitating infections and infestations abounding wherever standards of living and environmental hygiene are low. The vulnerable group—pregnant and lactating women and young children—are then affected by deficiency diseases such as beriberi, pellagra, anaemia, avitaminosis A and the protein deficiency syndrome commonly known as kwashiorkor (malignant malnutrition, polydeficiency disease). The underlying causes of malnutrition are many: low productivity of land, the consequences of general poverty, inability to produce the right kinds of food and failure to adopt proper methods for food processing and preserving. Traditional customs, or mere ignorance, may sometimes prohibit the use of existing resources. This undernourishment prevails, incongruously, in the face of endless relatively empty lands, as well as partially used, misused and potentially useful lands awaiting development, in spite of the fact that one agricultural worker should be able today to produce and preserve several times as much food as a handworker could 50 or 100 years ago.

Visits to the Far East, particularly to India, during the last 10 years, incidental to other studies, offered an opportunity to collect some supportive observations. The Indian dietary for 360 million people in 550,000 villages (82.7 percent rural) varies from area to area, as one would expect in a country of its size and varied climate. From the torrid South to the temperate North and the cold areas in the higher altitudes, differing climates call for different requirements in the matter of diet and satisfy them differently. The problem is further complicated because in the older days when transportation was not easy, the dietary had to be based entirely on the availability of food locally. In the past the normal diet of the people in the various regions varied enormously. Rice is the staple of the diet of the people in such dissimilar regions as the Jhelum Valley of Kashmir, the lower reaches of the Himalayas, parts of the Ganges Plain and the coastal regions of India—Bengal, Orissa, Madras, Kerala and Bombay. In areas like Punjab wheat forms the main article of diet, while jowar, Indian millet and eastern mountain Bajara or sorghum-like grass grain (*Holcus spicatus*) take its place among the Mahrattas, an ethnic division of the Hindus in southwest and central India. Protein requirements are largely met by pulses (the edible seeds of a leguminous plant) throughout India, but in the coastal regions fish and in the hunter's land meat supply at least part of the protein needs of the people, though inadequately. Eggs and game are forbidden articles of diet for most of the Hindu-Brahmins and, in any case, they are not so freely available. Tragically, milk is also in extremely short supply in a country where the cow is held in such veneration. Difficulties are further created by customs and prejudices that limit the dietary list. Bajara, a staple of even well-to-do Mahratta families, is not looked upon with favor in Uttar Pradesh. People in the Punjab region have not yet taken kindly to fish. Many in the South would look with horror on the eating of any meat. For the Hindus of the Saurashtra or West Indian states, fish, flesh, fowl and eggs are taboo almost everywhere. These food traditions, in addition to their religious significance, are quite comprehensible for they developed in tropical countries before refrigeration. To the Christian pork is a delicacy; to the Moslem it is an anathema. In the past most administrators were Europeans with naturally different dietary habits, growing out of an altogether different set of circumstances. Little attention was paid to dietetics in a country where diets varied widely and were mostly based on such factors as availability of foodstuffs, religious and customary inhibitions and personal prejudices, as they are in general throughout the world.

The general estimate is that the caloric intake of the population in India is more than 10 percent below minimal requirements. If one appreciates another aspect, the growth in population, one begins to see what a serious food problem India faces. From 100 to 110 million tons of food grains will be required for a population of 480 million in 1966, allowing for some raising of current consumption levels. A target o. 100 million tons would permit a net daily consumption per person of 15 ounces of cereals and 3 ounces of legumes for the estimated population; the consumption was 13.3 ounces of cereal and 2.4 ounces of pulses in 1956-57.

India's Second Plan, covering the period of 1956-61, includes measures to develop irrigation, develop and extend use of fertilizers, manure, improved seeds and improved agricultural practices. Programs to develop animal husbandry, dairying, fisheries, poultry, forest and soil conservation, development of cooperative institutions and warehousing also form part of

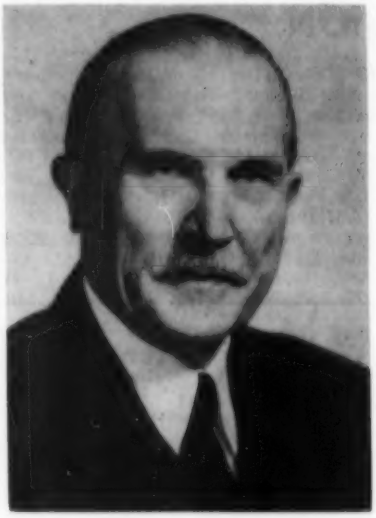
the Plan. Unfortunately bad harvest in 1957-58 and to certain miscalculations seemed to undermine the hopes of the Plan. But after three years of implementation and with the help of good weather and foreign aid, the Plan began to show results. In preparing the Third Plan, first priority is given to the expansion of food production.

Not generally known, self sufficiency in supplying foodstuffs to a given human population cannot be achieved unless it is considered in juxtaposition with the food and nutritional requirements of animals. They contribute to the agricultural economy of the country and directly to man's food. In India in 1950, there was one ox or cow for each three persons, and the animals competed with man for the same foodstuffs. Attempts were made to divert a foodstuff ordinarily consumed by animals, such as oil, seed cakes and bran, to satisfy human needs. In the course of this process there were great dangers of damaging the stamina and milk yield of the cattle.

The Nutrition Advisory Committee of the Indian National Research Council, after extensive deliberation, rendered a detailed report, which is now part of the nationalized food production policy in India. It sets forth the total quantities of food required for both man and animals and the ways and means of making up the deficit so as to satisfy the growing needs within a reasonable time.

Of interest to this audience, because it reflects trends in most underprivileged countries, is the list of subjects issued by the Nutrition Advisory Committee of the Indian Council for Medical Research in 1955. By drawing up detailed programs of work, indicating the institutions where such programs could be undertaken and the funds, personnel and facilities considered necessary for the conduct of the projects, they were listed in this order of importance: (a) protein malnutrition projects, surveys, clinical and field trials with protein-rich foods, (b) protein metabolism, clinical and field trials with protein-rich foods, (c) human lactation, (d) growth and physical development of Indian children, (e) endemic goiter, (f) lathyrism, (g) fluorosis, (h) energy metabolism, (i) nutritive value of foodstuffs, (j) carbohydrate, fat, mineral and vitamin metabolism and last (k) food technology. According to the latest reports by a student of the Indian Institute of Technology, Kharaguv, a small pilot study with a small fruit and vegetable packing plant at Nagpur, Central India, is being planned. In consular and embassy circles even a meat packing plant is visualized in the near future.

The Council, following the trend of the times, recognized the need for fortification of food and made certain recommendations to the Government. The first foods to be "sophisticated"



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are the hydrogenated oils manufactured in India. They are being fortified with 700 IU of vitamin A per ounce before sale.

In the primary interest of public health nutrition, a visit to the Nutrition Research Laboratories at Coonoor (Madras) showed that protein malnutrition is a major problem there, just as it is in many other countries both in and out of the tropics. Extensive studies have shown the dietary insufficiency of protein and calories and the possible imbalance resulting from inadequate supply of vitamins to be the primary predisposing factors to ill health. In combination with parasitic infection, the digestion and absorption of protein from the gastro-intestinal tract of child patients is impaired. Significant changes in some constituents of blood can be reversed by successful treatment. A very important advance in the treatment of kwashiorkor: The disease appears where children are customarily weaned largely or wholly on starchy paps without adequate addition of animal or protein-rich vegetable foodstuffs. It has until recently been treated with skim milk and other animal proteins. Investigations at Coonoor showed that Bengal gram, a common Indian foodstuff with protein of high biological value, could be utilized successfully for this treatment. Prevention of protein malnutrition among children in poorer classes in rural areas is now in progress.

Diet surveys by state nutrition organizations continue to show certain basic defects in Indian diets. Predominance of cereals and deficiency of milk, milk products and other protective foodstuffs are the most significant. Poverty and unavailability of food at reasonable cost are important factors. Ignorance, however, also plays a part; even cheaper articles of food such as legumes and green leafy vegetables are consumed in insufficient amounts. Nutrition surveys in school children have shown a depressing picture. If malnutrition in an appreciable proportion is not to be a permanent feature, some programs must be undertaken to improve this state of affairs. Skim milk and other foodstuffs given by UNICEF and other voluntary agencies as free gifts in mid day meal programs in schools are being distributed in certain states, but these programs vary a great deal. In effect, they cover only an insignificant fraction of the total school-going child population.

In this connection, a unique scheme of producing milk and milk products in the Bombay State deserves description:

The village of Anand, in the Kaira District just north of Bombay, is not a big community. The villagers were steeped in the old traditions; men, women and children worked long hours for pitifully small returns. For generations their water buffaloes, if they survived the various calf diseases so common under poor sanitary conditions without veterinary supervision, had produced abundant milk. At certain times of year there was too much milk for local mouths, and the market was glutted; at other times milk was not to be had, even for the village children.

In 1945, the Government of Bombay launched a scheme to supply Anand milk to city consumers. The ultimate goal was to distribute at least three ounces per head per day. During the first stages, however, collection of the milk and its processing were left to contractors and private dairies, and very little of the increase in price offered by the government was received by the farmer. In dissatisfaction with their economic status the villagers organized the first village cooperative society. Eventually other societies from surrounding areas joined to form the Kaira District Cooperative Milk Producers' Union. With the help of the Bombay government, plans for the building of a complete dairy near Anand, known now as the Central Dairy of Bombay, or the Aarey Milk Colony, were initiated in 1949. It visualized the first plant in the world to provide quarters for the water buffaloes (which are the property of the dairymen), cattle pens, milking sheds, quarters for the owner and his workers, built and general services provided and maintained by the state.

The milk was to be diluted, preserved by pasteurization at 170°F. for 15 seconds, bottled and distributed refrigerated to the people of Bombay, or it was to be dried and powdered, and so conserve or convert the surplus to cheese and other dairy products. With this in mind, the Kaira district provided 3,500 acres of jungle; this will

ultimately hold 30 dairy farm units. At my first visit there in 1952, it held 17 units, but in 1959, 28 units were in operation, and the milking lines from 13,000 buffaloes had risen to 55,000 milking buffalo cows. Today the Aarey Dairy collects milk from 20,000 farmers in more than 70 villages. As much as 25,000 gallons of milk are brought in every day during the flush season for the production of dry milk, pasteurized liquid butter, cheese, ice cream and casein. The value of the industry was estimated at $30 million in 1952, and close to $50 million in 1959. It is now self-supporting, but in its early days it received dairy equipment from the New Zealand government under the Colombo Plan and technical advisers from the Food and Agriculture Organization of the United Nations. Over the years, UNICEF has donated some $180,000 toward the cost of milk storage tanks, refrigeration equipment and evaporating and drying equipment. This was done with the understanding that the plant would make available free rations of milk to mothers and children in the area—an obligation being fulfilled in the amount of at least 50,000 quarts a day.

Members of the Kaira Co-operative Union, which houses their buffaloes valued at $150,000 per dairy unit, pay 80 cents per buffalo per month for feeding and veterinary services. As much as 25,000 gallons are brought in from outlying villages not incorporated. The pasteurization plant handles about 4,000 gallons of milk an hour. Begun on a small scale by people dissatisfied with their poor lot, the cooperative will turn over about $4 million worth of dairy products a year and will accumulate funds to complete the original plans. The undertaking solves part of the protein problem in Bombay, and it has attracted attention in other states. Plans were made in 1959 to duplicate the Aarey Dairy Colony in Calcutta. Financial aid given by UNICEF and the Colombo Plan has enabled several Indian cities to organize city milk supplies and the manufacture of cheese in the remote mountain valleys of Nepal.

Nearly 50 years ago during my brief visit to India from South Africa, the poorer classes before eating their bowls of rice sprinkled them with some kind of powder from small paper bags. Examination of a sample from the bags showed the powder to be fish meal. In 1952, with the assistance of workers at the Haffkine Institute, one of the primitive little plants preparing these bags was located at Marvi in West Bombay on the Indian Ocean. The Catholic population, an ethnic mixture of Hindu and Portugese, were maintaining a flourishing fishing operation with modern gear. The catches, mostly perch-like fish, are cleaned, hung over poles and preserved by the traditional method of sundrying. Apparently part of the finished product is sold as dried fish; another part is ground to meal, packed in small bags and sold for a few cents. This is the most popular and least expensive animal protein. The undertaking seems moderately profitable, because a Coca Cola stand is located outside the village. Judging from the graveyard of tanks and other military equipment, this was a defense post during World War II.

In the Far East, people rely almost solely on fish for their animal protein; fish culture in one form or another is found in every sector. Commercial operations have existed for centuries. Methods and practices handed down for generations are being improved. Fish ponds are ploughed, tilled, limed, fertilized, weeded, cultivated and harvested. Like chicken, fish can be produced in cages. Under ordinary conditions one pound of fish can be produced from four to six pounds of vegetable matter. Highly intensive fish culture is possibly one of the branches of food technology that flourishes in unindustrialized countries.

One of the newer developments is the cultivation of fish in rice fields. More than 197 million acres of land produce the world's supply of rice, and most of this area is situated in Asia. In wet rice cultivation the fields remain flooded for three to eight months a year. At the end of the season these fields yield a meager harvest of naturally stocked wild fish. As Japan has shown, the culture of fish can be greatly increased. It has been established that in the Far East the total wild fish production in rice fields could be increased to over 160,000 tons a year.

In many parts of Africa fish is the only available, and often the most popular, animal protein, especially the dried smoked fish. The distribution is wide in the inland areas of Central Africa, as several recently obtained photographs made in the Congo amply illustrate.

The rural population of India and Pakistan depend almost exclusively on dung for their fuel. The production of wood from India's forests is said to provide only 15 percent of the fuel for villages alone. One hundred and eighty million tons (dry weight) of dung are burnt annually in India. It could be replaced by 230 to 350 million cubic meters of fuel wood if the marginal lands could be properly planted. In addition to fuel wood production, such plantations would beneficially affect the water balance of the area in which they are grown and help check wind erosion and improve the production of neighboring agricultural lands. By returning the enormous quantity of organic matter to the soil, instead of burning it, the cereal production in India could be increased by about 7 million tons, or 10 percent of the total grain production, or about 80 percent of the wheat production alone. Organic matter improves the physical structure of the soil, and the land could produce higher yields. Thus the provision of an alternative fuel for cow dung would provide an immediate and lasting relief of the food shortages. A modest beginning is foreseen in the Third Plan.

One is constantly reminded that in Asia, and as a matter of fact also in Africa, due to lack of knowledge of preservation, the losses in stored grains are great. The warm humid climate of India is a favorable environment for insects and fungi and impedes natural drying of crops; in the primitive storage facilities on farms the losses may exceed 4.5 million metric tons or 10 percent of the total cereal production. This would represent about 5,700 million daily rations of 800 grams of paddy rice each, enough to supply over 15.5 million people for a year. Prevention of these losses is particularly urgent in parts of the world where food is scarce. Food technology in the Occident could be of great assistance, but, like any application of new principles, it may give rise to new medical problems.

You might be interested in a fleeting glimpse at food technology in the USSR. A display of canned food in the windows of the great state department store GUM, in Red Square in Moscow in 1956, showed that food technology is advanced in Russia. Some products are remarkably tasty, for example the crab canned on special ships operating in the Bering Sea and northern waters of the Pacific Ocean. The price per can on the exchange basis was $36. Since similar prices are charged for the other commodities, canned food can be used only by the upper stratum of Soviet society.

Shortly after the Revolution, the government launched a progressive program to improve food technology. It imported technicians and experts from England and the United States. The industry is therefore of considerable standing and continuously improves its procedures in preserving food. Preservation in glass containers is practiced in the household, and cases of botulism due to home-canned food have been reported.

Finally, this account of impressions cannot be closed without yielding to the temptation to make a comparison between the acme of skillful food display at the Hotel, or Hospes, Exposition in Bern and the primitive tribal practices observed at a trading center at Katana in the Bivu Province of the Congo. During the butchering of sheep and cattle at the weekly market, a Baluba woman has evidently been assigned the task of mixing the partially fluid blood with the stomach content or rumen of a sheep. This mixture was packaged in small cups

or containers as a sophisticated food delicacy!!

These contrasts move the socially minded globetrotter. He wishes to leave with this audience one thought: Aside from providing technical advice to improve the preservation of the limited food supply, the countries having the cornucopia of abundance must share their surpluses with the less blest, and thus contribute to freedom from hunger.

Modern Trends in the Nutritive Value of Food Supplies Here and Abroad

By Charles Glen King,
Executive Director,
The Nutrition Foundation

Scientists who work in areas closely related to biochemistry apparently are very fortunate. The mysteries of life are nearly always in the foreground to spark one's interest in observations of our environment and in reading widely about new discoveries in the biological sciences. Research is particularly rewarding for those who have an opportunity to participate in it.

Another key factor that derives from an interest in biochemistry is the experience of finding how quickly new knowledge in this area of research fits into the pattern of new applications. Agriculture, food technology, medicine and countless pathways to high standards of living all become beneficiaries of solving nature's very complex but logical developments in structure and function.

For a few minutes let us consider two questions. First, why are the recent advances in nutrition research highly significant? Second, how well are we applying recent advances in knowledge to practical problems here and in other parts of the world?

Looking back a few years, it is easy to see why iron, iodine and calcium are essential to human health. It is not so clear to attach importance to the new discoveries such as those indicating that among the essential elements are zinc, cobalt, molybdenum, selenium and chromium. The quantities of the newly discovered essential elements required in the animal organism tend to be extremely small but this fact does not detract from their importance in biologic functions.

For example:

Zinc is already identified as a constituent of at least three types of enzymes that are characteristic of practically all animals (peptidases, carbonic anhydrases, and nucleotidase). And it serves as a practical plant food of worldwide importance (e.g. in California, Florida, New York, New Jersey and for eight major crops in eastern Washington where the soil is generally regarded as good).

Cobalt deficiencies among livestock, reflecting a low content in the plants used as food, have been identified in many agricultural areas over the world. And as a part of Vitamin B_{12} it serves both as a growth factor and as the only effective agent against pernicious anemia.

Molybdenum appears to be essential in nitrogen fixation, in photosynthesis, and in oxidizing enzymes that act on nitrogen bases and on fats.

Selenium, which overlaps strangely in several of the functions of Vitamin E, is important in liver functions, in the function of capillary walls, and in the maintenance of normal blood proteins.

Chromium, the latest member of the family, is already associated with normal growth and with the metabolism of sugars. Increased recognition of these new essential elements and possible new ones to come have developed through a regular pattern of being regarded as toxic in large quantities; then of no significance in small quantities; and then discovered to be essential for normal life functions within a specific intermediate range of concentration for practically all plants and animals. At this stage their practical use becomes widespread in the management of plant foods, in animal feeds, and finally in a well defined concentration range for human food.

An important practical result from the continued discovery of essential elements (now 20 or more) is to give greater emphasis to the use of meats, seafoods, leafy vegetables, whole cereals and legumes as excellent sources of balanced quantities of these elements. This trend of recognition adds substantially to our long established recognition of these same food groups as excellent sources of proteins and vitamins.

Another reason why these recent discoveries are highly significant is because of the increasing evidence that the quantitative relationships to one another are very important for normal functioning both in plants and in animals. Hence the safety and desirability of using a variety of foods from specific food groups is now on a more firm basis than ever before.

Time is required to build up a detailed record of the food content of trace mineral elements after new ones are identified. Nevertheless there is good evidence to contradict faddists or poorly informed individuals who follow the "party line" of faddists in their false assertions that modern applications of science have robbed the present food supply of health essential elements. The reverse of these accusations is true. This fortunate situation is in part a result of improved crop selection and improved food processing and in part a result of greater distribution of foods from all parts of the continent into the market place for nearly every community. A second advantage in nutritive quality arises from the fact that as the importance of mineral elements becomes more firmly established for the growth of good crops and the production of efficient animal feeds, these same elements enter into the human food supply with increasing reliability and balance. Guess work, economic risks and malnutrition tend to disappear with each advance in knowledge about the mineral elements.

Proteins and amino acids: One of the strongest trends in agriculture and in the food industry arises from the growing knowledge of protein quality, protein functions, and protein analysis. This is a rapidly advancing field especially with respect to discovering the approximate ranges in concentration over which the human body can make optimum adjustments in health. Despite many areas of detailed uncertainty concerning optimum protein intake, such as in relation to infancy or old age, and special stresses such as burns, or infection, the more advanced countries are now in the position to furnish reliable quantities of good quality protein foods to their entire populations. Our population is dealing with comparatively fine points rather than with grossly serious problems such as the former frequency of pellagra and stunted growth, or the severe problems of deficiency, sickness and death, as faced by about two-thirds of the world's less fortunate population.

Emphasis on amino acid balance raises a question that is certain to be of increasing importance in many of the under-developed countries. How well can food patterns be based on plant sources of protein especially in areas where production of animal protein foods will be inadequate for a long time to come? Amino acid balance by the use of mixed legumes and grains needs to be scrutinized as it can be by chemical analysis and biological assays, in terms of total nutrient intake for each agricultural or consumer area.

Fats and oils: Everyone in the audience is aware of the fact that there is more current excitement about the role of fats in human nutrition than in any other specific area of research and practice. On the positive side the evidence grows steadily that there are numerous advantages in maintaining a reasonable quantity and variety of fats in the human food supply. The efficiency of maintaining a normal

supply of energy to the body and in the adjustment of time intervals of eating, both argue strongly against going to extremes in avoiding reasonable amounts of fat. There is a considerable amount of evidence that points to an optimum content in the range of 30 to 40 percent of total calories. This is not a sharply defined range, however, because of the limited amount of data from human studies compared with animal studies and the additional fact that the body has a remarkable capacity to make adjustments to sustained food patterns of widely varying composition.

The satiety value of food at mealtime and the maintenance of a normal feeling of well being between meals are items of practical importance. Established food patterns to which our population is adjusted demonstrate their preference for a reasonable amount of fat in many of the most important and widely used foods. These factors should not take precedence above demonstrated risks to health but established practices and a normal sense of enjoyment of eating cannot be omitted from consideration.

The *increased evidence* of "essential fatty acids" being an important factor in *optimum human nutrition* represents a permanent advance, I believe, and therefore should have frank recognition. From limited data in human studies and from analogy in animal experiments, the required quantity of linoleic acid or its equivalent is not very large. Even the small amount of linoleic acid in cows' milk fat is acknowledged as being in a "minimum safe" range for infant feeding by most investigators.

Another item of interest is the fact that human milk fat derives its linoleic acid from the diet; and thus far, there has been no evidence that human milk from American mothers on typical diets has reflected any deficiencies either in her diet or in the linoleic acid furnished to the infant. Normal human milk furnishes about three times more linoleic acid than is supplied by cows milk and it seems reasonably safe to assume that the human adult requirement is not above this level when growth and metabolic requirements are very high.

Another point to keep in mind is that the kind of mixed diets that most Americans use will furnish moderate amounts of essential fatty acids including poultry, fish, lard, salad oils, margarine, many shortenings and significant amounts from nuts and vegetables.

There is no doubt that many factors are at play in the causation of coronary heart disease, cerebral strokes, atherosclerosis and related breaks in health. These would include at least the factors of genetic background, age, sex, mineral balance, excess or deficiency of calories, mineral salt intake, protein intake, nucleic acid metabolism, blood pressure, regulation of

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spontaneous blood clots, hormone balance (as in thyroid, insulin and pituitary disorders) and physical exercise. Although there is a low order of correlation between serum cholesterol values and the incidence of atherosclerosis, heart disease and strokes, the correlation is not specific enough to have a high predictive value, and many of our most competent and experienced investigators regard the correlation as only a useful tool to give an indication of a possible trend. In this sense the serum cholesterol test is useful both in experimental animal studies and in medical work, as a clue to other changes. Cholesterol is regarded by many of the foremost scientists more as an indicator than as a causative factor under many circumstances.

Progress in this field of research is remarkably active and is furnishing wonderful results in many of our leading research centers at the present time. On this basis, we can be reasonably confident that definitive answers to many problems will continue to develop rather rapidly. To cite some of the specific difficulties in assessing the overall problem at the present time, there is still uncertainty concerning the causative background of uncontrolled blood clots such as frequently cause the actual injury especially when there is a sudden attack or stroke. If a reliable predictive test could be established to indicate favorable or unfavorable trends, this would give a tremendous advantage both in fundamental understanding and in practice. Another area of uncertainty which unfortunately gives rise to many preliminary conclusions is with respect to the long term significance of serum cholesterol concentration changes during short periods, if the diet is well balanced independently of moderate ranges in intake of linoleic acid. There is sound reason for reservation on this score because of the well established fact that cholesterol is normally formed and maintained in a state of balanced formation-and-disposal over a wide range of dietary practices and environmental variables. On this score the genetic part of the picture gives important leads that may serve increasingly to guide physicians in their management of individuals. A physician is normally under pressure to do everything within good reason in the management of individual patients. This freedom of action in working with individuals on the basis of opinion represents a different kind of problem however, than general recommendations to the public in regard to the safety of the food supply or recommendations of extreme practices in food usage.

Nearly all nutrition scientists, medical or otherwise, are in agreement that it is desirable to avoid excess body fat, and when one is dealing with an established case of overweight, it is usually preferable to reduce the body weight to an ideal range gradually and with steady use of common foodstuffs such as represented in well established balanced diets, by simply lowering the total caloric intake in accordance with the individual's requirement of progress toward an ideal final result. In this kind of practice, of course, one needs to recognize the fact that on a dry weight-for-weight basis, all of the common edible fats furnish two and a quarter times more calories than furnished by carbohydrates or proteins.

Any tendency during reducing diets to go to extremes and digress from desirable patterns of eating, in which animal protein foods, cereals, leafy vegetables and fruits have a legitimate and scientifically sound basis, represents an undesirable trend.

So far as present data are available as a guide, it seems entirely reasonable that whatever adjustments need to be made in furnishing an ideal quality and quantity of fats in human diets, can be made in a positive fashion by including moderate consumption of animal protein foods, cereals, leafy and green vegetables and fruits and checking the total calories by means of body weight. Specific evidence of other health factors than excess weight should be checked with a competent physician before starting on a reducing diet to make certain that something important other than weight reduction is not in the picture. Moderate intakes of poultry, fish, selected salad oils, margarines or shortening in which linoleic acid is retained in practical quantities should permit reaching an optimum intake of linoleic acid without major changes in currently accepted well balanced diets.

There is likely to be a trend in conserving the "linoleic acid equivalent" value of edible oils when converted to solid margarine or shortening fats in response to public interest. Changes

of this nature are both technically and economically feasible even though initial costs obviously will be involved, and market demands for these products are difficult to predict.

Meanwhile, there should be firm recognition of (a) the desirability and the constructive role of fats in human diets, and (b) the further fact that changes in fat selection do not imply any decreased emphasis upon the need for high quality protein foods of animal origin.

Additives: We are in a transition stage of adjusting food practices to new Food, Drug and Cosmetic laws. During such a period, undesirable trends and tensions are likely to occur. There is need to be forthright, however, in challenging vigorously any measures that do not meet the fundamental and constitutional requirement of interpretation in the light of reason and scientific judgment. The National Academy of Sciences has stated the issue clearly.

Meticulous care is needed to prevent undue risks to human and animal health in the use of agricultural chemicals, food products and food additives. Properly tested materials are essential, however, for use as insecticides, fungicides, etc., and their application is clearly in the public interest. Obviously the chemical industry and the food industry have a mutual and great interest in this area of progress, and there is good reason for this joint cooperation with government regulatory agencies.

One of the critical needs is to correct legislative acts and administrative policies based on the false and unscientific concept of "zero" tolerances. In place of the unsound absolutism implied by "zero" tolerances, the fundamental principle should be to provide for safety on the basis of reason and scientific judgment. Both in principle and in practice, very low ranges of concentration of chemical material would have no biological significance. Each substance should be appraised in terms of:

(a) quantities too small to be significant;

(b) quantities that become biologically significant—either favorable or unfavorable to the organism;

(c) a quantity above which injury is likely to occur; and, (in the case of useful nutrients),

(d) an intermediate quantitative zone in which the substance is either essential or safe and useful.

Other parts of the world: Development of international markets for our abundant food supply represents an area of great importance and merits vigorous attention. However, there are other aspects of the food problem in many countries that need diligent consideration: This is with respect to the contribution that their own improvements in food production and consumption can make toward reaching higher standards of living. The food and related industries should take a vigorous interest, I believe, in cooperating wholeheartedly with underdeveloped areas of the world to assist in applying current knowledge in nutrition, agriculture, food technology, management and public health. Developments of this kind need to be nurtured in accordance with established cultural patterns and the resources that are available. Constructive measures of this kind are, in the long run, of mutual economic advantage.

In order of priority, the greatest need in most instances is for trained and experienced personnel, both in science and in management. Secondly, there is generally a crucial need for modern equipment with which to produce, process and distribute foods of high nutritive quality. Safety in terms of sanitation generally imposes a severe hazard, also, and acceptance by the local community is difficult to estimate in advance. The most urgent nutritional need in underdeveloped countries is nearly always for adequate protein foods. And children just beyond the weaning stage—age 1 to 4—are characteristically the most vulnerable group. This last point—good quality protein foods for children in the age range 1-4 years—is without doubt one of the greatest problems for the world at the present time. This is true whether one is speaking of health, economic development, or reaching any *standards of living that will permit* reasonable social and political development.

The United Nations agencies, our own and several other national governments are working to improve food conditions in underdeveloped countries. There is no doubt however, that the American and Canadian food industries can make a great contribution in this respect. This responsibility cannot be taken lightly but should be approached with care and emphasis, commensurate with the opportunity.

Foods Are Chemicals

By Dr. Emil Mrak, Chancellor, University of California

The title assigned to me is "Foods Are Chemicals." This seems like such an obvious subject that when I was asked to speak on it I wondered why one would talk about foods being chemicals? This is what I asked myself. On the other hand, when a person with the wisdom of Dr. Ira Somers asked that this subject be discussed, there is a good reason for it and this was enough for me. It became apparent after giving the matter some thought and after checking into some of the literature that there is a point to make. While I did go into the historical development of our chemical knowledge of foods to some extent, unfortunately the limitation of time did not permit covering it to the extent that I would have liked. I found it an extremely intriguing subject and one that would certainly merit further development because of the early development of knowledge in this field that, in my opinion, would help explain some of the dilemma in which we find ourselves today.

I will try to present some ideas on the basis of early literature and on the basis of my own views and experiences.

I am certain it will be of interest to consider briefly the development of knowledge concerning the composition of foods and possible influence of this information on the consumer of the past and the present-day consumer.

Early Food Chemistry

It is very difficult to tell just when we first started talking about the chemical composition of foods. It is even more difficult to ascertain when man first started using chemicals in foods. Most certainly, this goes back to antiquity—even to caveman. Most of us know that when caveman dried his meats, he frequently hung them over fire in order to speed drying. In this way he not only accomplished preservation by drying but by smoking. I cannot help but wonder if a caveman initiated his process today and was confronted with our modern food laws and the enforcement of them by the Food and Drug Administration, if he wouldn't have a great deal of trouble as a result of drying over a smoking fire. Most certainly, it would be necessary for him to prove the harmlessness of the smoke constituents absorbed during drying. Yet, this process has been used for thousands of years, is used today, and smoked meats are relished by many people. We are fortunate that caveman thought of it long before Congress and certain dedicated but misinformed people started thinking about chemicals.

The use of salt goes back many thousands of years and there is plenty of evidence to indicate that the ancient use of salting was an early means of preservation. Then, too, there are many stories about the natural fermentations used for the production of various foods and in particular, lactic, acetic, or alcoholic fermentations used for the production of certain foods and the incidental preservation of these foods.

In more recent times, although going back perhaps many hundreds of years, we find that food processes involved the use of one type of chemical or another. The American In-

dian used alkali produced from ash to treat corn, and the Mediterranean people used a particular type of ash for the treatment of grapes prior to drying. Likewise, the Chinese used sea water in the treatment of their soya protein, perhaps to remove the antitrypsinogens. In any event, these treatments involved the use of chemicals and did not harm the food or consumer but actually were involved in the preservation or improvement of the food.

Newer Knowledge

Accumulation of scientific knowledge on the chemistry of foods really is quite recent. I would like to have found the first statement relating to the chemistry of foods but this would have required many hours of library work, so I'll start with Liebig, who in the middle 1800's talked about nitrogenous or flesh forming foods and nonnitrogenous or heat generating foods. Such thinking, of course, gave way when the first reference to the detailed composition of foods appeared. In referring to the first volumes of the "Experiment Station Record," which unfortunately is no longer published, one finds reference to the U. S. Department of Agriculture Bulletin No. 28, published by W. O. Atwater and C. D. Woods. This interesting publication contains the history of food analysis, an explanation of terms used in discussing composition, the maximum, minimum, and average percentage of composition, and fuel value of a large number of American foods. The foods considered include meats, fowl, fish, dairy products, canned foods, vegetables, fruits, nuts, flour, meal, sugar, starch, bread, crackers, cake, and other prepared foods. Included in the proximate composition were water, ash, fat, total nitrogen, carbohydrates, and fuel value.

Atwater's and Wood's publication has been revised on a number of occasions and even to this date the U. S. Department of Agriculture publishes on the composition of foods. More recent editions have included information on various components of the carbohydrate fraction including starch, sugar, information on acids, minerals, and vitamins, etc.

Such information was more or less our general knowledge until World War I. I would like to point out very strongly that this was the type of knowledge that was easily digested, easily understood by the layman as well as the scientist, teacher, and others. This was true even though for many years we have had information concerning empirical formulas and structural formulas of various components of foods, particularly sugars, other carbohydrates, amino acids, and fats. More recently, we have had information concerning the vitamins. Even this information did not seem to bother the average consumer because he was accustomed to common names such as vitamins, fats, proteins, etc. It was not necessary for the consumer to be confronted with frightening organic nomenclature or with structural formulas, or even to glance upon these complicated and horrible looking things.

He was able to accept chemical information about foods and talk about the value of calories and components such as proteins, vitamins, and minerals. Without doubt, his thinking was conditioned by a limited amount of information pertaining to certain substances, particularly minerals. For example, there was a time when iodine was considered toxic because it was observed that large doses fed to animals might be harmful. On the other hand, there was propaganda pertaining to the advantage of eating products produced in a certain state because of the iodine content. None of these things seemed to have caused great deviations from a normal understanding of our foods and appreciation of a developing science.

In more recent years, however, and particularly since World War II, we have learned a tremendous amount about naturally occurring chemicals involved in the construction or breakdown of foods during their normal development in nature. This information has been brought to us not only by food scientists but by people whose activities may appear remote from the field of food science. For example, those working on the metabolic processes of bacteria or fungi, or muscle metabolism, or the biochemical processes in plants have contributed greatly to our knowledge of the constituents of foods. This is all well and fine but these fine contributions have had, in my opinion, adverse effects as well as beneficial value to the food industries. Without doubt, our understanding of some of the natural processes has paved the way for the use of harmless chemicals that have resulted in great improvements in our food supply. In some cases, the chemicals used occurred naturally in foods but, unfortunately, they could not be designated in the layman's language. The food scientist could no longer use the simple terms that the consumer could understand but rather chemical nomenclature that has been frightening to many consumers. Here, in my opinion, is where some of our present-day problems started.

What's in a Name?

As an example, let's take a look at a food item such as an apple and consider in detail some of the chemicals that one might run into when he goes from the surface of the apple to the interior. On the very surface we find waxes and the term wax is easily understood by everyone. On the other hand, as these waxes are studied and we learn more about them, and we start calling them polycrystalline, paraffins, etc., the average consumer just does not understand this terminology or the lingo. Yet, we may find that it would be desirable to use some of these wax fractions for the coating of a food to retain certain desirable properties. Many of our consumers, and particularly those who consider themselves idealistic and protectionists, object very seriously to the use of such chemicals—yet, they would relish an apple that nature covered with them.

If we proceed a little further, we would run into a corky layer of the skin which contains suberin and, of course, we would find cellulose. Today, we do use in some of our foods a material called methylcellulose. This does not sound very good to many of our consumers, yet it is a perfectly harmless substance and one that is quite similar to that which occurs in nature. In between the cells we find various pectic substances. We know the structures of some of these substances, we have ideas on how they are made in nature, and likewise, how they are broken down. We have various names for them, and we use such terms as polygalacturonic acid, etc. As long as we speak of pectin, we are on safe ground but if we get more specific and talk about definite constituents of the mixture we term pectin, then we will be in trouble. If we put on the label polygalacturonic acid, it will raise a crescendo of horror among those who would protect us against every wrongdoing by the food manufacturer.

Chemical Processes in Nature

If we proceed a little further into the apple cell, we find protoplasm and in this the nitrogenous materials, fats, starch, dextrines, acids, sugars, and a whole galaxy of substances. A multiplicity of life processes take place in the living apple cell—as we eat it. Various chemicals are being constructed in a step-wise manner. These substances may involve going through a half a dozen more chemicals before the final one is produced or perhaps a whole galaxy of chemicals. Today, charts are published showing the various cycles such as are involved in the metabolic processes. When we eat a leaf of lettuce, we may be eating thousands of chemicals and a system that has under way a whole galaxy of processes producing different chemicals. One but need look at some of the proposed steps for the production of beta carotene, which is pro-vitamin A, or the Krebs cycle which involves a great many chemicals including acids and other constituents. Some of the constituents are seldom if ever heard of by the average consumer. If information concerning these natural chemicals should leak to those who are opposed to the use of any chemicals by talking, writing, etc., it really can and does frighten unsuspecting consumers.

We have learned about the ripening processes of fruits, and we now know

that ethylene gas is produced by certain fruits during ripening. At one time, this was unknown, although the Chinese were wise enough to observe that products of combustion of kerosene would stimulate the ripening of persimmons. Later, an American scientist observed that one of these products of combustion was ethylene gas. When this gas was first used as a means of ripening, there were serious objections to employment of this terrible chemical, and it turned out to be quite a surprise to the "conscientious objectors" when it was found that the food itself produced ethylene gas. Here again it was a lack of knowledge combined with the energies of a few dedicated but misguided individuals.

Other processes involving the stepwise production of chemicals in foods are concerned with the synthesis of flavors and changes in flavors as fruit ripens. It is rather interesting to note that the flavors we observe in the fresh product are certainly not the same as those in the cooked product. Actually, new chemicals are produced, old ones are changed, etc., during the cooking process. I am told that there are a number of chicken flavors depending upon whether one eats a chicken raw, boiled, fried, broiled, or roasted. Apparently, the influences of temperature time, and humidity result in the production of different flavors, all of which are chemicals.

Other syntheses involve the production of colors, such as anthocyanins which are water soluble, chlorophyll, and carotenes, some of which actually may be toxic if ingested in extremely large quantities. In line with this, Dr. Darby made an excellent presentation at the meeting of the Federated Societies held in Chicago last April.

Natural Food Chemicals

I should like to tell you a little about some of the toxic substances discussed by Darby and the dilemma in which we find ourselves. I recall vividly the early and fragmentary knowledge concerning selenium. It was, without doubt, considered a toxic substance and something to be avoided. It was considered to be a potential carcinogen. Now we are told that selenium in minute quantities is beneficial and perhaps even essential. This certainly brings out the statement that was once driven home to me by a graduate student when he said he didn't like to learn anything too well because the chances were he would have to change his mind as time went on. Selenium occurs in foods and feed. As a matter of fact, the concentration in grass in certain areas is so high that it is harmful to cattle. On the other hand, "Torula" yeast may be so low in selenium that it may cause liver changes in rats. Now I'd like to know what would happen if we should add traces of selenium to dried "Torula" yeast for animal food or even human food. I'm certain the dedicated objectors would object—and then too—what about the Delaney clause, for selenium is a potential carcinogen when taken in large amounts.

The story of selenium lends credence to the statement recently made by W. E. Baier of the Sunkist organization when he pointed out that Dr. Miller in his amendment recognized, perhaps for the first time in all legislative history, this simple but often ignored fact, "There are no harmless substances; there are only harmless ways of using substances." This is an extremely important concept and definitely applies to natural foods as well as those that have been substantially ameliorated.

The story about flourine is also interesting. It was first incriminated as an undesirable element in water because the constant use of water containing a concentration of 2 ppm caused mottled enamel, and in higher concentrations, a bone disease. Later flourine was found to be distinctly beneficial in the prevention of dental caries when consumed in varv small amounts. Likewise, the acceptance of the beneficial effect of iodine on goiter was delayed for years because of the production of iodism in persons treated with too large doses of this element. Not only are quantities involved in these chemicals, but also the terms. Sodium flouride or iodine, I believe, are rather frightening terms to the average consumer. We have not made the story clear to them.

There are other cases where excessive amounts of naturally occurring chemicals can cause harm. This is true of very large amounts of vitamin A and D. As a matter of fact, I once saw reference to the toxic effects of polar bear liver resulting from the extremely high concentrations of Vitamin A in it. Whether or not this is true, I am not certain, but it is an interesting story and makes the point. A small amount of polar bear liver might be good.

Over-ingestion of cobalt, lactose, riboflavin, and salt also can be harmful. No one will deny the importance of these substances and the necessity of having them in our diet. There are many other substances that occur in nature, such as the alkaloids which occur in some of our common beverages such as coffee, tea, and cocoa, the phytate of cereals or the oxalate of rhubarb, spinach, and chard, which have been incriminated as interfering with calcification.

A few other toxic substances may be solanin in potatoes, particularly those that have green portions as a result of exposure to the sun, and saponins which may occur in a number of plants. An interesting chemical that has been discussed recently is L-5-vinyl-2-thiooxazolidone which has been observed in the rutabaga, rape, and other members of the genus *brassica*. As you may possibly know, *brassica* is a genus in the family Cruciferae which includes radishes, turnips, kohlrabi, cauliflower, cabbage, broccoli, brussel sprouts, etc. Whether or not this substance occurs in all of these species, I do not know; nevertheless, it has been shown that this substance does occur in one genus and that it is goitrogenic. A rather interesting aspect of this substance is that significant quantities of goitrogenic activity to man is present in milk of cows grazed on some of the species of *brassica*. Darby points out that Astwood has argued that the antithyroid activity of this naturally occurring agent may be greater than that of aminotriazole in the most heavily contaminated cranberries. Of course, we need studies in this area, but I do not personally believe there is a basis for worry as to whether or not the consumption by humans or other animals of quantities of these agents naturally present in non-contaminated foods exert significant pharmacological activity. It was not my intention to go into such subjects in detail; however, it was an interesting relationship.

Facing the Facts

The real point I intended to bring out here is recent discovery of numerous complicated chemical compounds in a number of our foods. As information about these naturally occurring chemicals appears in the literature, it is often misunderstood by the dedicated person and, unfortunately, is misused by a small number of poison pen artists. This is the situation even though there is every reason in the world to use small quantities in certain foods.

I can go on for a considerable period of time merely mentioning chemicals that occur in foods, or that may result from cooking, or other treatment of foods. My purpose is, first of all, to call to your attention the fact that foods are made up of a whole galaxy of chemicals, some of which are simple and others very complicated ones. Food is literally a mass of chemicals—thousands of chemicals and perhaps even in the hundreds of thousands. We are learning more about them, but there is still a long way to go. No longer is it satisfactory to speak in general terms about carbohydrates, proteins, fats, etc. On the other hand, we use a complicated nomenclature and learn more and more about the chemicals in foods. As indicated above, this new information involving the use of strange terms and statements is really frightening to the consumer as fragments of this information reaches him. As an example, I should like to quote from a letter sent to me when I was chairman of Governor Brown's special committee appointed to make recommendations concerning policy with respect to agricultural chemicals. In this letter, the consumer made a plea that we outlaw all chemicals and particularly the one that was labeled NaCl and termed sodium chloride. Whether you know it or not, this is a chemical we use every day in our home

cooking and could it be completely removed from the letter writer's food, he would become a sick consumer and eventually a dead one, for the chemical worrying him is table salt.

At a food editors conference held in New York last October, Dr. Robert White-Stevens pointed out that, as with all matters of universal concern and vast complexity, ample opportunity is provided for misunderstanding, illogical conclusions, and unfounded fear to arise. This has certainly been the case with respect to the wonderful advancements we have made in knowledge concerning the chemistry of our foods. We still know so little as compared with what we will know eventually. This leads me to say, with respect to the consumer and the idealist who would outlaw all food chemicals, a little knowledge has been and will be dangerous knowledge unless we do something about it.

Let's Not Panic

What area is of more concern to the average person than his food and his interpretation of the effect of his food on his health? At one time, he was concerned with epidemics, such as cholera and smallpox which resulted in some pretty horrible tragedies. One needs but read a few pages in the book published by Howard W. Haggard in 1929 to realize what fear with respect to one's health may induce people to do. At the time of the Black Death epidemic in Europe, many believed to be disease spreaders were burned alive. In other cases, unbelievably brutal methods of torture and execution were resorted to in an effort to stop the plague. In the past, when people reached the stage of panic, history reveals they often resorted to unreasonable and stupid extremes. Most certainly, we don't expect things of this type today, but I can assure you that forces can evolve and are evolving now that may result in even more extreme and unworkable laws than you have at present.

At the recent hearings of the committee I mentioned above, there were indications of strong feelings with respect to chemicals in foods—some would outlaw all agricultural chemicals and food additives whether they be good or bad, or synthetic or natural. They would even outlaw synthetic fertilizers. I'm certain that some of the people who would do this are idealists but others are frightened because of misinformation or the lack of information. There is one thing I am certain of, and that is that the consumer today is genuinely concerned about his food, its volume, variety, cost, and above all its purity and safety. There is an assumption on the part of many that all poisons are cumulative, and, therefore, their foods should be completely free of any chemical showing any toxicity at any level. This, of course, would eliminate many of our required chemical constituents

DR. EMIL M. MRAK

including some of the vitamins, essential minerals, and even table salt.

It is apparent that something needs to be done about this situation and the true picture with respect to foods. The chemistry of foods and the use of chemicals in foods must be clarified to the average consumer.

What To Do?

The question then arises, what can we do about it?

A paper by W. E. Baier on the pros and cons of food additives points out that the problem is one of lack of understanding on the part of some legislators, some agriculturists, some food producers, but particularly a lack of understanding of a considerable segment of the consuming public. Baier points out further that it is a paradox that often those people who most seriously want to gain an understanding of the subject appear to end up with the least understanding and the most misinformation. This is well manifested by those who are motivated, by interest in the subject, to read books that are available and understandable to them. Unfortunately, many of these books are the types that do not necessarily paint the true picture but rather one of fear. Baier points out further that there must be active support for an educational program if consumers are to achieve an understanding of the situation before they allow the scuttling of the very laws which can be so effective for their interests. The educational program should be started so that the average consumer can distinguish between fact and fiction.

I should like to express one more statement that Mr. Baier made. He philosophizes that the present trouble may well be that our responsibilities and interests cause us to scrutinize one end of the dosage range or the other while ignoring the end in which we are not particularly interested at the moment. In other words, he points out that we have not made it clear that so many of our chemicals such as vitamins A and D may actually be toxic at high levels but beneficial at low levels. This story has not been made clear to the consuming public. This is well manifested by the recent developments with respect to selenium. As far as the concerned consumer knows, it is toxic and should be avoided at any level. He has not and may not for a long time learn that very small quantities may be beneficial or perhaps even essential.

I should like to close this paper by stating that the food industries, the chemical manufacturers, and all concerned with the welfare of the food industry and the consumer must embark on an educational program to get the true facts before the consumer. This program must be a broad spectrum one and must be well planned and carried out over the years. It must hit all segments of our population. In doing this, we must think in terms of what people will read and what they will not read. Considerable literature has been put out during the past few years on the goodness of our food supply and the best fed nation in the world, etc. As much as I have tried to read some of this, I have found most of it extremely drab, boring or at the least uninteresting. The format of these publications has been about as poor as it could possibly be. In one case even the color of the ink used was brown rather than black thereby making it more difficult to read in a poorly lighted room. So often the print has been small and illustrations have been lacking.

At the recent hearings of the Governor's Committee I have referred to previously, it was brought home to me most emphatically that professional people are very anxious to have information of this type in brief form in publications that are well illustrated, documented, and prepared in a manner that is not only easy to read but conducive to read. As one doctor put it, they would like publications that they feel compelled to look through and file on the shelf for future reference rather than in the waste basket for relief. I realize that it is a pretty big order, but it is an essential one. Most certainly, we must make available information that is as interesting and as exciting to read as the book by Longgood entitled, *Poisons in our Food*. If this is not done, I am convinced that we may be confronted with consequences—not those of the days of the alchemist when individuals might be burned—but those of the modern period when laws might be changed and, unfortunately, not in a constructive manner.

PLANT MAINTENANCE AND SANITATION

PRESIDING: DR. IRA I. SOMERS, Director, N.C.A. Research Laboratories

PANELISTS:

JAMES W. BELL, N.C.A. Research Laboratory, Washington, D. C.
E. S. DOYLE, N.C.A. Research Laboratory, Berkeley, Calif.
R. B. JANOTA, Swift & Company, Inc., Chicago, Ill.
VERN NELSON, Green Giant Company, Le Sueur, Minn.
R. H. SPANNENBERG, Portland Cement Association, Chicago
ALFRED TRUMAN, Gerber Products Company, Fremont, Mich.
C. V. WITTENWYLER, Shell Chemical Company, Union, N. J.

Each panelist was assigned a number of questions which had been submitted by canners. Of the large number submitted those chosen were given priority on the basis of the questions most frequently requested.

R. H. Spannenberg discussed the subject of concrete floors. The construction of new floors, patching and resurfacing old floors; types of floors for various plant areas; and finishes for floors were some of the specific items covered in the questions. The latest bulletin of the Portland Cement Association, *Concrete Information*, was passed out to the group.

C. V. Wittenwyler discussed the use of epoxy resins. Specific topics covered were various plastics used, application of epoxies in the canning industry, costs of epoxies in relation to other materials, and the fusion banding technique for coating machinery.

R. B. Janota covered the general subjects of paints in the canning industry. Specifically the subjects covered were paints for equipment, paints for retorts, retort crates and what to do with them, sources of information on paints, and mold inhibitory paints.

Vern Nelson answered a number of questions in regard to care of equipment and buildings. The subjects included preparation of machinery and equipment for end-of-season shutdown, protection against damage from lift trucks; cleaning of ceilings, and the relation of paint colors to canning.

Alfred Truman discussed plant maintenance from a canner's viewpoint. This included organization and routines of a maintenance program; the sealing of bearings, motors, etc.; the care and maintenance of service lines; and cleaning of food piping.

J. W. Bell discussed the choice of materials and coatings in relation to Food and Drug requirements. He also answered questions concerning the treatment of lug boxes and baskets.

E. S. Doyle presented a discussion on the detection of microbial build-up in a plant. He also discussed the types of fluorescent fixtures used in canning plants with regard to high moisture and corrosive areas.

Dr. K. F. Meyer Receives Forty-Niners Service Award

Dr. K. F. Meyer, Director Emeritus of the George Williams Hooper Foundation of the University of California, San Francisco, was presented the eighth annual Forty-Niners Service Award in special ceremonies at the Convention January 21.

The Award recognizes his basic research in the science of food preservation and his contributions to the early establishment of processing times and temperatures for canned foods. Dr. Meyer's continuous interest in and service to the canning industry have been an important factor in its growth.

Edward E. Judge of *The Canning Trade*, president of The Forty-Niners, presided at the Award ceremonies. Special tributes to Dr. Meyer were made by Dr. G. M. Dack of the Food Research Institute, University of Chicago, and Dr. Roger Lueck of American Can Company.

In his response, acknowledging the Award, Dr. Meyer told of early research and recited the sequence of events in attaining sufficient scientific knowledge in the canning industry to assure the elimination of botulism.

Dr. Meyer was born and educated in Switzerland and earned his Ph.D. at Zurich. He served as a professor at Pennsylvania and the University of California. In 1915 he was named Director of the Hooper Foundation at the University of California Medical Center in San Francisco. While much of his work was directed to medical research, he nonetheless gave his time and attention to canning industry research problems. He formally retired a few years ago.

The Forty-Niners is a service group, organized in 1949, to assist the C.M. &S.A. and other canning industry groups. The 49ers have assisted the N.C.A. and other industry groups on many occasions. The Service Award is made annually to further their objective of promoting achievement and progress in the industry.

Allied Industry Meeting

An informal, round-the-table meeting was held Tuesday afternoon of the Convention, as a requested follow-up of a similar meeting held in New York City last June. This was for the purpose of acquainting the public relations men of organizations and firms whose activities are in the canning trade about progress on several of the Consumer and Trade Relations projects and to familiarize them with the character of the N.C.A. public relations work. Joseph B. Weix, Jr., Chairman of the C. & T.R. Committee, presided, and President-elect Hemingway and Executive Secretary Carlos Campbell attended.

Nelson H. Budd, the N.C.A. staffman for the C. & T.R. program, explained how the Protective Screen program has been publicized by speeches, articles and press releases; George Anderson of D-A-Y reported on the contribution made to the meeting of the special committee called by the Governor of California when the editor of *The Ladies Home Journal* testified that their millions of readers had displayed no lack of confidence in the safety of commercially canned foods. Robert B. Heiney, Assistant Secretary of N.C.A., reported on legislation that might affect canning and related industries; Jean Schoonover of D-A-Y on several items in the Consumer phase of the program including the Food Editors Conference, the labeling program with women's clubs, and the school curriculum program. Don Callahan, of the D-A-Y staff, and Robert Moss, Idaho Canning Company, Payette, Idaho, member of the C. & T. R. Committee, on the Canning Crops Contest; James Scully, of Nejelski & Company, on the institutional program; and Jack Simmons of D-A-Y on the N.C.A. Briefs project.

STATISTICAL QUALITY CONTROL CLINIC

PRESIDING: DR. HOWARD L. STIER, Director, N.C.A. Division of Statistics
ADDRESS: "Organizing for Quality Control"—LEONARD SEDER, Quality Control Consultant, Malden, Mass.
Applications of SQC in Canning Operations
Panel:
BRUNO FILICE, Filice & Perrelli Canning Co., Richmond, Calif.
GERALD DESMOND, Gerber Products Company, Oakland, Calif.
ROBERT FRY, Continental Can Company, Inc., New York City
C. B. WAY, Green Giant Company, La Sueur, Minn.
ANDREW IRVINE, Campbell Soup Company, Camden, N.J.

Organizing for Quality Control

By Leonard A. Seder
Quality Control Consultant

The words "quality control" are coming to have a new meaning to a large segment of American industry today. The food industry is bound to feel the effects of this new look, if, indeed, it has not already done so.

Modern quality control has a greatly enlarged scope compared with its progenitor. It now covers a wide spectrum of activities, starting with the setting of basic management quality policy, including the development of new methods for achieving better product performance and assuring greater customer satisfaction, and extending on down to planning and carrying out detailed procedures for controlling production processes.

The increased scope and broader recognition of quality control stems primarily from the ever-increasing tempo of competition, both in this country and abroad, from the steadily rising demands of consumers, and from the growing awareness of American management that the science of quality control has grown up and is ready to assume heavier responsibilities.

The "growing up" of quality control managers, engineers and technologists is an important factor. In most industries, it has taken about 20 years for the quality control function to progress from a sub-function under production concerned solely with sorting good product from bad, through the stage of independence from production and the application of statistical quality control methods, to the present stage of a true management function capable of planning, executing, evaluating and improving the company's quality performance. But the important fact is that, in many companies, quality control has arrived at this point.

This modern version of quality control has been called "Total Quality Control." (1) The name is appropriate to the breadth of the objectives of such a function. These objectives usually are:

1. To assure that the company's products meet the customer needs.

2. To assist in achieving optimum quality costs for these products.

Such a function is therefore concerned not only with the conformance of product to specifications, but with the very generation of those specifications, and the economic decisions that enter into the setting of quality levels and targets. To remain in today's market, companies must know better then ever before the customer's likes and dislikes, his preferences and sensitivities to quality differences, and his degree of satisfaction with the product he buys. In other industries, such as automotive, aircraft, missiles and space vehicles, this has meant the development of new knowledge in the area of the *reliability* of product performance during the life of the product.

Moreover, the concept of "Total Quality Control" embodies the important idea that there is a break-even point in quality, as there is in everything else. Not "quality for the sake of quality," but "quality consistent with the economics of the market" is the new war cry.

The new concept recognizes the need for *realistic* specifications—not simply tight ones—to reflect the balance between the cost of a high level of quality and the dollar and cents value of having that level. It recognizes also that improved product control can often be achieved through the principle of prevention at less cost than is currently being spent to salvage, downgrade, blend off, repackage or otherwise dispose of substandard packs. Reduction of quality losses thus becomes one of the chief targets of a modern quality control activity.

How will all this affect quality control in the food industry? I do not pretend to know precisely, but the general impact is not hard to forecast if one has lived through the change in a number of other industries and has some knowledge of the food processing situation. In a word, the change will clearly involve a realignment of and greater emphasis on long-practiced activities. In some cases, it will undoubtedly involve the initiation of altogether new activities.

To indicate what these activities are, this paper aims to present some of the principles of modern quality control as they may be applied—and in a number of instances have already been applied—in the food processing business.

To begin with, the modern picture is that a food processing company must be organized to handle two different but related broad types of quality problems:

1. The day-to-day quality problems of agricultural raw materials, packaging materials, process control, acceptance of outgoing product, disposition of substandard product, surveillance of co-packers, audit of plant quality, and a host of others. These are the firing line problems requiring technical knowledge, patience and, above all else, intelligent decision-making.

2. The long-range quality problems of improving customer satisfaction, reducing complaints, eliminating off-grade product, developing better processes, inventing new quality measurements, cutting quality costs, improving employee quality-mindedness, and others. These are the deep-rooted problems calling for teamwork, management perspective, data collection and analysis, ingenuity, and persistence.

The first group of problems represent the effort to maintain a quality level; they have been called by J. M. Juran the problems of *maintaining the status quo*. (2) By contrast, the second group of problems represent the effort to achieve a breakthrough to a new level. Juran calls these, problems of *changing the status quo*. To tackle them sucessfully requires adequate quality maintenance and quality improvement activities, respectively.

Quality Maintenance Activities

The basic quality maintenance activities are fairly well known and widely practiced in the food industry. They are listed below, together with a partial check list of questions to judge whether a company is getting

the full measure of value from these activities.

1. *Incoming Inspection* of cans, bottles, lithography, packaging materials, etc., and *grading* of raw food material.

(a) Is inspection performed according to a systematic plan, as against a haphazard one?

(b) Are scientific sampling tables used, so that inspection can be minimized?

(c) Are samples taken in a conscientious, unbiased way?

(d) Are standards established for the non-measurable defects in consultation with vendors?

(e) Are the standards incorporated into a readily-accessible form for reference of inspectors?

(f) Are vendors required to submit quality data with each shipment and is advantage taken of these data, after establishing their reliabilitiy, to reduce the amount of inspection done?

(g) Are rejected lots actually returned to the vendor or otherwise treated so as to act as an incentive for him to remedy deficiences?

(h) Are established grades strictly adhered to?

(i) Is off-grade raw product adequately detected and rejected or otherwise diverted to suitable channels?

2. *Process control* of peeling, cutting, trimming, washing, cooking, etc.

(a) Are samples taken periodically according to a systematic plan?

(b) Are measurements or judgments made and recorded?

(c) Are they charted for ready reference of operator, supervisor, and inspector?

(d) Are there tolerances or indicated limits within which these measurements are supposed to lie?

(e) Is a distinction made between limits that are mandatory for production to follow and those which are optional? (Mandatory requirements are usually those restrictions on temperature, moisture, solids content, sanitation, etc., which affect end-product acceptability, shelf life, or ultimate condition when consumed. Optional requirements are usually those temperatures, pressures, amounts of additives, etc., which must be varied to compensate for raw material crop, locational or seasonal variations.)

(f) Is it clear to all concerned who has the authority to stop, change, or adjust the process for each of the quality characteristics when an out-of-limit situation develops?

(g) Is it clear to all concerned who has authority to divert the production stream to "feed" or other substandard designation until the needed process change has been affected?

(h) Is the role of the control laboratory clearly understood? Do they make process decisions? Or do they merely supply numbers for production to make decisions? Or do they simply audit the decisions of production people?

(i) Is use made of statistical quality control charts, where applicable? This applies particularly to any measured characteristic, such as packaged weight, fill, headspace, potency, percent Grade A, etc.

3. *Outgoing product approval* of packaged food product.

(a) Are those who have the approval authority made independent of the production function and thus mentally free to exercise competent judgment?

(b) Are adequate samples taken to insure reasonable detection of off-grade product?

(c) Is there opportunity for a free decision to divert off-grade product?

(d) Is there a procedure for forcing ultimate decisions on off-grade product to the higher levels of management?

(e) Are standards established for appearance defects in both the product and package?

(f) Is sensory testing of the product performed by adequately tested and calibrated taste panels whose error of measurement is known?

(g) Are tests made periodically for the integrity of the package and adequacy of seal?

(h) Is a hold-for-release procedure employed and enforced when bacteria count or other time-consuming tests are necessary parts of the outgoing check?

4. *Surveillance of co-packer operations.*

(a) Is there a scheme of periodic visits to co-packers to observe operations?

(b) Are these visits planned in detail so as to maximize the benefit?

(c) Do the visits attempt to evaluate the important questions of how the co-packer selects raw material, carries out process controls, enforces sanitation requirements, controls filling weight, etc.? (Indeed, all of the questions in this entire check list apply equally well to a co-packer.)

(d) Do the visits also attempt to probe and evaluate co-packer management attitude toward quality and orient it to the packer's own?

(e) Are audit samples taken periodically and checked in our own laboratories to measure co-packer performance?

(f) Are these measurements used to provide a continuing score on co-packer performance, rather than a "spot-check"?

(g) Are the results of the scoring followed up by company management to remedy unsatisfactory conditions?

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5. *Audit of outgoing and market quality.*

(a) Are periodic, unbiased, small samples taken from each pack and examined independently of the plant that produced them?

(b) Are the results scored and interpreted statistically to distinguish between real trends and sampling fluctuations?

(c) Has there been agreement to the method of scorekeeping by those being measured?

(d) Are arrangements made to select on a continuing basis samples of our own and competitive products at the point of sale for similar audit and scorekeeping?

(e) Are the observed differences in quality characteristics between freshly-packed and off-the-grocer's-shelf samples evaluated, fed back to the specifications group for possible revision of specifications?

(f) Are the results of the scoring and competitive evaluation acted on by company management to revise standards, establish improvement projects, purchase new equipment, etc.?

Quality Improvement Activities

With regard to quality improvement activities, there is need for one or more individuals to be free from other day-to-day activities to devote their efforts to the identification of the major chronic quality problems, to the development of programs to solve these problems, and to the planning of quality on new products so as to avoid these problems in the future. The absence of a separate person or group so charged means that it is unlikely that these jobs are being done, so that the company is, at best, just "holding its own" without making any significant progress in the quality area.

Some of these quality improvement activities have been practiced in the food industry, though not usually under the aegis of the Quality Control Department. Others are just beginning to be recognized. The areas of interest and some of the techniques are indicated below.

1. *Achievement of customer satisfaction.*

(a) Does the company have a clear-cut quality policy, understood by all levels of management, rather than competing policies at different levels of management?

In one food company, for example, the stated policy could be paraphrased as: "We should sell only products that we can be sure will achieve maximum customer satisfaction." On the other hand, many day-to-day, down-the-line decisions were being made on the basis of a policy that might be stated as: "We should sell all products which Mother Nature and our processing capabilities will allow us to produce economically." The conflict of these two policies made quality improvement very difficult; in fact, it left an open question in many minds as to whether quality improvement was really necessary at all.

(b) If the company's policy is to equal or exceed competition, are the mechanics set up to know whether this goal is being achieved?

This involves questions of obtaining samples of competitive products, determining which characteristics (flavor, texture, stability, etc.) are really important to the consumer, measuring these characteristics, and reporting on the results at periodic intervals. None of these steps is easy in the food industry, but all are necessary if the company is serious about living up to its quality policy.

(c) Is advantage taken of the knowledge of the company's standing against competition by enlighted managerial decision?

Because of the peculiar problems of sensory testing, there is often reluctance to take indicated action upon the disclosure of significant differences between the company's product and the competition's. One food company, for example, kept careful track of the percent Grade A in its product against those of its major competitors and always showed a high degree of superiority. But the question of whether the customer could sense and appreciate the difference repeatedly stymied definite action. A continuous program of preference tests, in which consumers were specifically asked to rate the company's product against "Brand X", was needed. Only then could company management be provided the means to decide whether (1) to capitalize on the superiority through advertising with assurance that new users could thereby be acquired; or (2) to obtain the economies inherent in reducing its own percent Grade A with confidence that sales would not be adversely affected.

(d) Is there a belief in the principle that "the customer is always right" both as to those things he *can* recognize as well as those he *cannot*? (3)

This implies keeping abreast of the constantly changing consumer preferences, but it also implies that improvement of quality beyond the point of the customer's ability to discriminate is adding cost without value. One company lost a lucrative business in 5¢ candy bars because the customers' tastes gradually turned away from the type of chocolate it used. On the other side of the coin, another company saved a small fortune by reformulating its product to use less costly ingredients when it learned that only a small percentage of customers could distinguish between the two formulas.

(e) Are chronic problems in the customer satisfaction area identified and do they become the subject of team attacks for solution?

2. *Reduction of quality costs*

(a) Does the company have knowledge of its quality costs? Measurement, analysis and reduction of quality costs has become an important tool in many industries. It can become equally valuable in the food industry. In general, quality costs are defined as those costs which exist because it is necessary to meet the needs of the customer and because there is something less than perfect control of processes. In the food industry, these fall under the headings of (1) failure costs, (2) yield losses, (3) control costs, (4) prevention costs. The categories of specific costs and the definitions associated therewith are shown in Figure 1.

(b) Are steps taken to assure *optimum* quality costs?

Quality costs are optimum when the total of the four categories cited is a minimum. Study of quality costs has led to some generally accepted axioms. These are: Quality costs exceeding 10 percent of sales are usually reducible by spending more on prevention. Prevention costs that are less than 10 percent of total quality cost are too low. Control costs which are over 25 percent of total quality cost are too high. However, these axioms are to be used only as guides, particularly since the food industry may turn out to have quite different rules of thumb. More important than these rules is the *absolute magnitude* of the quality costs. When they are in the range of $500 to $1,000 per year per productive employee, it is highly probable that they can be reduced to the extent of 50 percent or more. (4)

(c) In pursuing the reduction of quality costs, does the organizational structure of the company recognize

FIGURE 1

Summary of Quality Costs

Item	Definition
1. Cost of Quality Failures	
(a) Spoilage	Net cost of packages and food spoiled: (1) For "off-standard"; (2) By obsolescence; (3) By damage in warehouses.
(b) Salvage labor	Labor performed in production operations and warehouses to destroy or recover spoiled or damaged goods.
(c) Package inspection	Labor performed by packing operators in inspecting and discarding defective packages.
(d) Field losses	Cost of destroying damaged product, plus cost of reimbursing grocers for goods condemned by salesmen.
(e) Degradation	Disposition of higher priced product into lower price channels for quality reasons.
2. Losses Due to Yields	
(a) Packing material overusage	Cost of packing material consumed in excess of theoretical required for goods actually packed.
(b) Raw material overusage	Net losses of raw material unaccounted for by output of material and by-products.
(c) Processed material overusage	Net losses of partly processed material unaccounted for by output of material and by-products.
(d) Giveaway	Cost of food put in packages in excess of label weight.
3. Cost of Control	
(a) Production inspection	Portion of production operators' time spent on product inspection where inspection is *major* part of job.
(b) Production operator control	Portion of production operators' time spent on product inspection, where inspection is *minor* part of job.
(c) Quality Control Dept.	Cost of operating the Quality Control Department.
(d) Scale and instrument maintenance	Portion of Engineering Department time spent in checking and adjusting scales, thermostats, instruments, recorders, detectors, etc.
4. Cost of Prevention	
(a) Planning of quality	Cost of research and engineering time spent planning specifications and quality controls on new products.
(b) Process improvement	Cost of process engineering time spent studying processes to improve yields or reduce failure costs.

the essential principles of organizing for a breakthrough?

As expounded by Juran, and well confirmed by many successes, a breakthrough in the knowledge needed to reduce failures or improve yields can be most effectively obtained by a team approach and the employment of five basic principles: (5)

(1) Principle of Prevention

(2) Principle of Scientific Method

(3) Principle of Separating the Vital from the Trivial

(4) Principle of Staff Assistance

(5) Principle of Coordination

(d) Are the chronic problems tackled, rather than the sporadic?

The technique of using "Pareto's rule" to select the projects to be tackled has received broad acceptance. This rule states that the majority of the actual losses are concentrated in relatively few causes.

(e) Is distinction made between management-controllable deficiencies and operator-controllable deficiencies, and is the appropriate program of improvement employed for each type?

Deficiencies which can be prevented by production operators are operator-controllable; they can be reduced successfully by a program of selling production operators on regulating the process to avoid the defiiency. Product deficiencies which cannot be prevented by production operators are management-controllable; they can best be cut down by a program of planned experiment and data to diagnose the cause of the deficiency, and coordinated action to develop and institute a remedy.

(f) Are the basic quality data, such as process capabilities, determined and made available to research, production and other groups concerned with new product development?

In the world of variation that characterizes food processing, there is vast need to talk quantitatively instead of qualitatively about variation in planting, breeding harvesting peeling, cutting, trimming, washing, mixing, baking, cooking, drying, blending, votating, package-filling, and all the rest. This quantification is needed to solve existing quality problems, but is especially needed to develop realistic specifications so that tomorrow's product can be launched without the anguish of today's.

3. *Executive quality reports.*

(a) Does company management receive periodic, capsulated, graphically portrayed reports that give a grasp of the quality picture and help unify executive thinking for quality decisions?

Such reports should be regarded as second in importance only to financial reports if the company really intends to take product quality seriously. Some of the possible items for inclusion in such a report are:

(1) Competitive surveilance results against company product

(2) Trend of customer complaints

(3) Trend of quality costs

(4) Trend of giveaway (in package overfill)

(5) Trend of specific important quality characteristics (such as percent protein in dog food, percent meat in meat pies, percent Grade A in fruits and vegetables, etc.)

The foregoing check lists and comments have attempted to outline the main areas of activity of "Total Quality Control" and to indicate their relevance to the food industry. It does not pretend to be comprehensive, nor does it cover all of the pertinent questions that may be raised with regard to the basic functioning of a Quality Control Department. It is my hope that some of those in the audience will be able to add materially to the subject matter and that others, to whom some of these ideas may be new, will be stimulated to seek ways of improving their own operations thereby.

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Acceptance Sampling and Inspection of Metal Containers

By Robert B. Fry,
Continental Can Company, Inc.

My formal presentation will deal with "Acceptance Sampling and Inspection of Metal Containers." I would like to briefly outline this from a container manufacturer's point of view, first by describing the manner and background under which we utilize quality control, and second, present some thoughts on this with respect to the users' or food processors' QC effort.

At one time our business problems were comparatively simple and consisted merely of cutting up sheets of tinplate and applying the art of canmaking. It was simple because there were very few canmaking materials and our quality goals were loose (terribly loose by today's standards) and aside from leakage which caused product spoilage, there were few, if any, customer requirements.

In short, up through the 1930's we had plenty of operational latitude in our methods, quality requirements, and business economics. Today the picture is entirely different; radical alterations have occurred, greatly complicating our industrial life. This has undoubtedly occurred in your case, too. For example, we now deal with an almost infinite array of canmaking materials. Where we used to have two enamels, this has expanded to include over 50 commonly used ones. Where there used to be two types of tinplate, there are well over 25 types. Quality requirements have also altered, for as you well know, no longer are the old warranties of several cans per thousand spoilage a benchmark of acceptable quality. In addition, containers must now meet many other requirements which never before were considered.

As this transition occurred it became necessary to form a full quality control department. This was in response to the increased tempo and need to measure quality statistically using more intricate tests and feed back information to reach the higher plateaus of quality required.

Out of this emerged our present quality control program. It is essentially a three-pronged attack on our quality problems and is comprised of:

A. Equipment Set-up Evaluation

The essential philosophy underlying this phase of our program is that in order to achieve production runs of uniformly high quality, each component operation must be set up perfectly prior to starting production. This technique is essentially a statistical evaluation to assure that each station of each machine is adjusted so that its dimensional level or process average is close to the specified nominal or ideal dimension.

B. In-Process Quality Evaluation

The second phase evolves around in-process quality evaluation. These techniques provide a continual audit of each component operation throughout the run. Here the idea is to spot trends, prevent defective material from going to subsequent operations, etc., using the well-known axioms of process control.

C. Final Lot Evaluation

The third important prong of our attack is termed Final Lot Evaluation. This is carried out by inspectors on finished product. It is an entirely different approach than either equipment set-up or in-process quality evaluation. These are both purely process controls whereas this facet deals with an appraisal of outgoing quality through sampling. It is a form of acceptance sampling.

It is our intent that this program will result in a more satisfactory product to the buyer. However, some customers have felt that for added protection they should establish their own acceptance sampling program.

Our outlook on this is that it shouldn't be necessary as it is not an inexpensive undertaking and our program should suffice. On the other hand, we fully accept such a program as the customer's prerogative. We do strongly feel that for it to be a successful venture we should be a full partner in its development so that there is mutual agreement on the following essentials:

1. The technique of sampling and sample size provide a representative sample.

2. The Acceptable Quality Level or AQL be realistic.

3. The classification of defects and definition of defects be clear and be meaningful.

4. That where material is questioned under the program we have the right of review and independent reevaluation.

Actually we have had some rather happy experiences where such acceptance sampling programs have been worked out in the spirit of a mutual supplier-packer team approach. In fact, if I were participating in such a panel discussion five years ago I would have predicted very extensive use of pure acceptance sampling programs by food processors. However, this never materialized to the degree I thought it would.

Why? For one thing, it is expensive and a lower cost approach can be substituted which can be quite effective when properly coupled with information feed-back to our QC program previously described. I refer to what, for want of a better term, might be called an incoming can quality audit.

This type of a program involves a much smaller level of sampling than required for acceptance sampling. It is not designed to provide statistical assurance of catching a single given sub-standard lot. Rather it is designed to provide, over a period of time, a measure of the quality level. It also permits the canner to integrate this work with his own in-process QC program.

I believe there is much to be said for the so-called quality audit approach as it represents an effective low cost method. In closing, I must also stress that this type of program, no less than acceptance sampling, requires a high degree of understanding and mutual effort between the canner and can manufacturer for it to be successful.

Use of Statistical Quality Control in Controlling Raw Product Quality

By Bruno A. Filice,
Filice & Perrelli Canning Co.

You now know from what you have heard that statistical quality control has definitely found its way into use in the canning industry. It assures the consumers of our products a more uniform quality, and our respective companies a more efficient and economic production operation. The experience in my own company has shown that the control of fill weights in canned fruit results not only in a more uniform drained weight of product, but also more uniformity in syrup strength, texture of product, and overall flavor, therefore, a more uniform product for our consumers. Furthermore, improved case yield and plant efficiency usually result from good fill weight control. Our experience in this field has produced similar results in controlling the fill weight of canned vegetables. This same control technique adapts quite well to the control of the many factors of quality that pertain to tomato products such as solids measurement, consistency, acidity, etc.

Another use of statistical quality control involves the use of this technique in evaluation of color, defects, character, size, etc. It is possible to chart these attributes to better evaluate quality as it is being produced and, therefore, do a more efficient job of maintaining a definite quality level.

The application of statistical quality control in our plants has changed the scope of quality control. More actual control is accomplished at the time of packing, thus making production people aware of the quality level of their product at the time it is being produced. Also, we have found that SQC eliminates much of the bias affecting a person's decision on production matters.

Recently, the N.C.A. Western Laboratory Committee on Statistical Quality Control has been actively engaged in the expansion of SQC in the raw product field. This work has been accomplished in cooperation with the University of California. Most of us on the Committee recognized that the quality evaluation of raw material would add immeasurably to production efficiency in the plant provided this information would be available to the cannery production department early enough and in such form to make the information useful. Furthermore, this group felt strongly that the factors of quality that affect raw materials lend themselves easily to statistical evaluation. The committee decided first of all to study the variability of the quality factors of raw materials to determine how much variation was present. Secondly, they developed feasible sampling plans. As a result, sufficient information is now available on certain quality factors in pears and tomatoes to make possible a statistical quality control program for these raw materials on the part of a canner. Work is also progressing on apricots in an effort to determine the variability inherent in fresh apricots for processing.

Another important aspect of statistical quality control in the canning industry has to do with the education of those interested in its use and the coordination of the effort in this direction. Short courses have been held on both elementary and advanced techniques for some years in California, Oregon, New York, Maryland and, no doubt, other areas. Also, seminars on specific phases of SQC have also been held frequently. The Institute of Food Technologists Committee on Quality Control of Food Products has, as one of its aims, the furtherance of efforts toward education in SQC and the dissemination of information on this subject. Also, the above-mentioned N.C.A. Committee and the American Society for Quality Control have been very active in this aspect of SQC.

Not all the standard techniques of SQC can or should be used in the canning plant. We have found that certain modifications of the control chart have proven much more effective than the standard procedure. Some of these modifications were described in detail last year at the N.C.A. Convention (see N.C.A. INFORMATION LETTER No. 1764, pp. 52-56).

Other speakers who participated in the panel discussion were Dr. William A. Golomski, vice president, H. J. Mayer & Sons Co., and C. B. Way, of the Green Giant Co., Le Sueur, Minn., Dr. Golomski and Mr. Way did not submit a copy of their remarks for the Proceedings.

Dr. Golomski discussed new developments in techniques and procedures that are useful to food processors. He briefly discussed a new type of control chart, "the cumulative sum chart." In addition, he also discussed the evolutionary operations approach to research problems.

Mr. Way discussed container fill in the canning industry. A paper on this subject by Mr. Way was published in the Proceedings of the 47th Annual Convention of the N.C.A. (INFORMATION LETTER No. 1472, pp. 73-76, 1954).

MECHANICAL HARVESTING AND HANDLING OF TOMATOES

MODERATOR: A. C. MOLL, Stokely-Van Camp, Inc., Indianapolis, Chairman, N.C.A. Raw Products Committee

Mechanical Harvesting and Handling of Tomatoes

Panel:
MAX D. REEDER, H. J. Heinz Company, Pittsburgh
S. K. RIES, Michigan State University, East Lansing
B. A. TWIGG, University of Maryland, College Park
S. G. YOUNKIN, Campbell Soup Company, Camden, N.J.
O. C. ZOEBISCH, Libby, McNeill & Libby, Chicago

Drosophila Control

Panel:
C. H. MAHONEY, Director, N.C.A. Raw Products Research Bureau
B. A. TWIGG, University of Maryland, College Park; and C. B. DENNY and J. M. REED, N.C.A. Washington Research Laboratory

Problems Encountered in the Use of Mechanical Harvesters for Tomatoes

By Max D. Reeder,
H. J. Heinz Company

With the year just ended, 1960 has brought into experimental usage several mechanical tomato harvesters. Two experiment stations, in cooperation with two equipment manufacturers, have developed machines. Two manufacturers have their own machine. One seed company and at least one canner have also developed harvesters. I would hesitate to make a guess as to how many other different machines might be in the tool room at this time. I will not attempt to predict when we will be using mechanical tomato harvesters on a large-scale basis. I hope that some of my observations might help you look into the future. Most of the time, when anyone has attempted to predict the future of automation in agriculture, his forecast has turned out to be hopelessly shortsighted and pessimistic. I have been reminded about the man who grew enthusiastic about private motor cars and foresaw the time when there would be 100 or so in every city. With this thought in mind, I will furnish you with a few observations about the past year's models of mechanical tomato harvesters.

All the manufacturers have stated that their machines were experimental in 1960 and the same will be true in 1961. Even with their caution in mind, many of us still feel that there is a fine line between experimentation and field application. All machines used in 1960 had too small a capacity. For example, when we plant our present varieties at 4,000 to 5,000 plants per acre, we can expect on an average of 160,000 to 200,000 green and ripe fruits on an acre. This has been our history when we expect to obtain around an 18-ton per acre yield. With this large volume of fruit and dense foliage of many varieties, all machines have a tendency to be over-extended starting at the front end of the machine all the way back to where the tomatoes were dumped into containers. The vine and fruit pick-up mechanism varied in efficiency. Probably the disc-type pick up with a belt that had a tendency to move in the vines did the best job. However, many loose fruit were left on the ground by all machines. Some machines were leaving 5 to 10 tons of ripe fruit on the ground. Stones and clods caused problems with all machines. All machines had difficulty harvesting tomatoes that were growing on beds or ridges.

After the tomatoes and vines were picked up and they started to come up the conveyor to the shaking device, all machines had one bad feature. They all brought up too much soil on the conveyor belt with the fruit. Although many people said that this could be solved by the end of 1960, I did not see nor hear of any machine that made this change. This can cause quite a quality problem if we do not eliminate a lot of the soil that is presently coming in on the machine harvested tomatoes. Spores are in the soil and these micro-organisms can and will cause spoilage in our packs unless we can eliminate a lot of the soil. The machine manufacturers must attempt to eliminate this problem of excessive soil in 1961.

The fruit shaking device, which removes the fruit from the vine, on the machines seemed to work efficiently under most conditions. Again, the worst feature was the piling up of vine and fruit in the shaker area. This, of course, was caused by the small sizes of the machines in relation to the volume of vines and fruits handled. This condition caused some good fruit to ride off with the vines. Actually, after seeing all of the machines operate, you can say that they do a fairly effective job in removing the fruit from the vines but the plugging of the elevator with the harvested fruit after it came off the conveyor under the shaker, was a problem of all machines. All the conveyors handling the tomatoes must be either larger or they must be moving faster in order to carry a larger quantity of fruit in the future.

Since fruits must be sorted on the last conveyor belt before they go into a container, some means must be available on each machine in order to sort out the underripened and damaged or rotten fruit. Only one machine had sufficient space for many workers. It probably will be necessary to have sufficient room on the machines for at least 10 to 12 sorters if we are ever going to handle several acres of tomatoes a day with each machine. Again it can be said that in the 1960 machines there were serious limitations as to the amount of plant material they could handle and still separate fruit from the plants effectively. The machines must be more versatile in order to handle dense and light foliage plants, to handle plants with characteristics of spreading or determinate vine habits, to handle heavy and light fruit sets, to handle ridged and flat cultivated beds of plants, and to handle high and low populations of plants on an acre.

I did see one machine operate under wet soil conditions and, on the whole, it did a satisfactory job for the conditions. But, again, there was too much soil on the fruit. At the present time the machines run between .3 to .85 miles per hour. Most of the pick-up mechanisms will handle only a 30-inch row, but this was too small a width in the majority of the demonstrations this past year. Even pear-shaped

varieties in California and Ohio spread too wide for efficient machine operation.

Many times some of us have been asked what speed these machines should travel or what acreage they should handle per hour. Many people feel that they should handle one-half to one acre per hour, which is the customary speed of some of our agricultural harvesters.

One machine harvested approximately 100 tons in a ten-hour day. If this machine was harvesting 20 tons of ripe fruit per acre you can see that 5 acres were harvested in a 10-hour day. One grower figured his cost was approximately $7.70 per ton which is around a 20 percent to 30 percent savings over the hand method of harvesting, when you consider labor expenses, housing, etc.

We have worked up some estimated costs on mechanically harvesting tomatoes and this I would like to show in chart form. At the top of this chart some of the estimated costs of the harvesters are shown. It runs from $5,000 to $15,000 for the machine. As of this time it is anyone's guess what the machines might cost. The left hand column shows the yield in tons per acre. You will note the projected yields are from 10 to 26 tons per acre. For example, the 10-ton yield per acre with the machine costing $5,000 would mean that a farmer could harvest his tomatoes at $5.81 a ton. A 10-ton crop with a $15,000 machine, over at the right top of the chart, shows the cost per ton at $10.81. The cost data was based on a five-year depreciation of harvesters with 5 percent interest on investment and 10 sorters at $1.25 per hour. We are estimating the machine would harvest one-half acre per hour and the machine would harvest 50 acres per season. The cost of the tractor to pull the machine and labor for the tractor was also figured in these costs. However, when the machine costs around $13,000 to $15,000 it probably would be self-propelled and this tractor cost could be eliminated. We have not attempted to project any savings by using bulk handling methods. These costs were made up to show only the actual machine harvesting cost, and you can readily compare these with your present labor rates for picking tomatoes including charges for housing and recruitment, all of which will average between $8.00 to $11.00 per ton.

Damage to Fruit Harvested with Mechanical Tomato Picker
(Bowling Green, Ohio, Sept., 1960)

Variety	No Damage %	Slight Damage %	Considerable Damage %	Ruined %
	No. 1 Color			
Fireball	32.7	31.9	29.3	7.1
Epoch	65.0	16.6	11.5	8.2
24	72.5	11.1	8.9	8.6
Red Tot VR9	95.2	3.8	0.8	0.1
	No. 2 Color			
Fireball	50.0	26.0	21.0	3.1
Epoch	91.0	9.0	0.0	0.0
24	94.0	2.4	3.6	1.0
Red Top VR9	100.0	0.0	0.0	0.0

We have made several tests on damage to tomatoes going through one mechanical harvester. You will note by this chart that four varieties were tested—Fireball, Epoch, 24, and Red Top VR9. The tomatoes were graded after they came out of the machine into two classes—those meeting U.S. No. 1 grade for color and those meeting U.S. No. 2 grade for color. At the top of the chart you will note the headings as to the description of damage. No damage, of course, means that the tomatoes were still free of fresh cracks and were the same quality that you might expect to find in the field before harvesting. By slight damage we mean small splitting or bursting. Tomatoes with considerable damage were tomatoes that had severe splitting and some of the locular content of the tomatoes had run out. The classification of ruined, of course, were the tomatoes so badly damaged they could not be used. For example, the No. 1 colored fruit of the Fireball variety had 32.7 percent of the fruit free of damage; Epoch 65 percent; 24 72½ percent; Red Top VR9 95.2 percent. When we sorted out the U.S. No. 2 colored tomatoes of the harvest, the percent of fruit free of damage changed on the Fireball variety to 50 percent not damaged; Epoch 91 percent free of damage; 24 had 94 percent free of damage; and all of the Red Top VR9 were free of damage. This shows that the riper fruit, which is necessary to meet our U.S. No. 1 standard, is a little softer and will be damaged 5 percent to 55 percent more than the fruit that is a little firmer, in the U.S. No. 2 grade. This gets us around to the point that all the machines in 1960 did considerable damage to the round fruit varieties. Most of the damage was again caused by the small capacity of the machine but some of the damage can be contributed to overripe fruit and fruits that were left on the vines until they would grade U.S. No. 1's. All the manufacturers believe they can correct a lot of the damage by making the conveyors larger, covering some of the rods with rubber, and eliminate or decrease some of the places where the fruit drop. Tomatoes should be handled like eggs if we are to get crack free tomatoes into our factories.

The equipment manufacturers along with some experiment stations certainly should be congratulated on their excellent job of developing the machines up to this time. They all recognize that a lot more work needs to be done. We know that in 1961 many growers will want to use mechanical harvesters. This certainly will be true of processors. But there are many danger signs that should be looked at prior to going into any mechanical harvesting program. We certainly feel that we want to move ahead but caution should be observed. The only varieties I have seen to date that can be harvested without too much damage are the pear varieties such as Red Top and Roma.

I want to emphasize five points that need to be worked out prior to harvesting tomatoes by machine successfully. We are not including varieties, containers or agronomic practices because they will be covered by others on this program but they too are very important. I'm only speaking of the equipment phase when I mention the five major points.

1. Soil should be eliminated from coming up the conveyor with the tomatoes. This is the number one problem from the standpoint of quality. One experiment station found populations of micro-organisms were 10 times higher in fruit harvested by machine

Estimated Cost per Ton of Harvesting Tomatoes by Machine

Yield Per Acre	Price of Machine $5,000	$7,000	$9,000	$11,000	$13,000	$15,000
10	$5.81	$6.81	$7.81	$8.81	$9.81	$10.81
12	4.85	5.68	6.51	7.34	8.18	9.01
14	4.15	4.86	5.58	6.29	7.01	7.72
16	3.64	4.26	4.88	5.51	6.13	6.76
18	3.23	3.78	4.34	4.89	5.45	6.01
20	2.95	3.41	3.91	4.41	4.91	5.41
22	2.65	3.10	3.55	4.00	4.46	4.91
24	2.43	2.84	3.25	3.67	4.09	4.50
26	2.24	2.62	3.00	3.39	3.77	4.16

into bulk bins than in fruit harvested by hand using lug boxes.

2. The pick-up mechanism should be such that vines spread out in abnormal as well as in normal growth habits may be brought into the machine. An improvement at this point will eliminate some of the present fruit damage and will also aid pick up of loose fruit from the ground.

3. Conveyors should be widened so that greater capacity is available and all rods used on the conveyors should be covered with rubber or some other material so that bruising and cracking of the fruit will be reduced.

4. The number of drops from the use of conveyors should be reduced wherever possible. Also, the height of the drops should be kept minimal so that fruit will not be damaged.

5. There should be adequate room on the machines for sorters to remove undercolored, damaged, or undesirable fruit.

It has been a pleasure to have this opportunity to discuss some of the trials, tribulations and problems that have been encountered in the use of mechanical harvesters for tomatoes. Again I want to emphasize that all machinery manufacturers say their machines are experimental. Certainly they have cautioned all of us; and I know that if we all continue to cooperate with them and our experiment stations, we will be harvesting our tomato crop mechanically in a very short period of time.

A Summary of 1960 Mechanical Tomato Harvesting Research at Michigan State University

By S. K. Ries,
Michigan State University

The third Michigan State University mechanical tomato harvester model since 1958 was constructed and tested in 1960. The major changes incorporated in the 1960 model were (1) the width was increased from 30 to 48 inches; (2) a sorting conveyor and platform accomodating up to six men was added; and (3) a device was added which enabled the harvested fruit to be gently lowered into bulk boxes on a separate trailer pulled alongside the harvester.

After this machine was tested and modified in Florida and on early transplants in Michigan, it was not necessary to make any major changes during the remaining season's research.

The mechanical harvest of tomatoes with the Michigan State University machine into lugs, 8-inch and 12-inch deep bulk boxes caused no appreciable increase in No. 2 or crushed fruit, compared with hand harvest. However, cracks over 1 inch long were two to three times as great for mechanical harvest compared to hand harvest. The juice yield was also about 3 percent less for mechanical harvest into all types of containers, compared to hand harvest.

As the depth of box increased, the fruit cracks over 1 inch long increased. This increase was greater for machine harvested fruit than hand harvested. The samples from the bottom 4 inches of all containers had more cracks than that from the top 4 inches.

Water handling was no better than dry handling and the quality was appreciably lower if the tomatoes were held longer than 24 hours.

Based on this single year's experience, the bulk box 12 inches deep appeared to be the most practical container for handling tomatoes.

Other quality measurements on many treatments are critical. These measurements on mold count, color, soluble solids and total solids will be made on the processed sample.

Simulated once-over harvest over a three-week period indicated that both Fireball and C-52 would respond the same. The total ripe yield reached a peak and maintained this peak for 10 days; however, during this period there were more deteriorated fruit and the juice yield decreased.

Two varieties, Libby's C-52 and Fireball, did not yield higher when grown in dual rows one and one-half feet apart or in populations of higher than 4,350 plants per acre.

Dropping tests, using a mechanical dropper, indicated as expected that when the dropping distance was doubled, it took much less than half as many drops to crack the fruit. Varieties responded differently and firmer fruit varieties did not crack as badly as softer varieties; however, no correlation of a firmness test was made with the dropping results.

Of all the materials tested for cutting down the effect of dropping, sponge rubber and ordinary canvas belt with "give" caused the least amount of cracking.

The results of two direct seedings were favorable for 1960. Yields of Heinz 1370, Fireball, and Libby's C-52 were all greater than 20 tons per acre for both planting dates.

In the replicated variety trials the following varieties look most promising when grown under East Lansing conditions: Cornell 54-149 and Fireball for early varieties; Libby's C-52 and OSC 435-4 for midseason; and Heinz 24 for a late variety.

Water Handling of Tomatoes

By B. A. Twigg,
University of Maryland

The use of five-eighths bushel baskets for picking and handling tomatoes, although commonly used in the East, is not a desirable practice. Tomatoes handled in such containers are subject to severe damage, resulting in many instances in poor quality and low recovery of the raw product. Too, tomatoes cracked in handling are open to deposition of eggs by *Drosophila* fruit-flies.

With the advent of mechanical harvesters there will not only be a need for a method of handling tomatoes which will reduce damage of the fruit, but also for a method of bulk handling the fruit without severe damage.

Since water handling has been successfully used on several commodities, cherries for example, a series of experiments were conducted by the Department of Horticulture, University of Maryland, during 1959 and 1960 to investigate the possibilities of using water as a method of bulk handling tomatoes.

1959 Studies

The 1959 studies were conducted on a laboratory scale, using 20 gallon containers for the water treatments, to compare different methods of handling tomatoes.

Procedure

Tomatoes of two varieties, Roma and Chesapeake, were graded and divided into three groups—overripe, ripe, and underripe. Each of these maturities was then divided into two lots, one lot being handled in five-eighths bushel baskets, the other lot being continuously immersed in sufficient water to permit free movement of the tomatoes. These lots were further divided into sublots for two storage temperatures—40° F. and room temperature. The Roma variety was removed from storage after 16 and 64 hours for quality measurements, and canned at the end of 64 hours of storage. The Chesapeake variety was removed from storage at the end of 3 and 24 hours for quality measurements and were canned after both storage periods. In order to simulate transportation the treatments were shaken on a modified seed cleaner. All treatments were shaken before storage and again after 3 hours for the Chesapeake variety and after 16 hours for the Roma variety. Weighing of the tomatoes initially and before and after each shaking, allowed calculation of

weight changes. On the Roma variety samples were removed periodically for determination of pH, soluble solids, and color.

At the end of the treatments all lots were canned according to standard commercial practices. Percent recovery was determined based on the original weight. With the Chesapeake variety, an initial percent recovery was determined on a check sample for each of the three groups of ripeness at harvest.

Results

The following table shows effect of water handling on the Roma variety.

TABLE I

Effect of treatment on pH, refractive index, and color on the Roma variety

Measurement	Treatment			
	Basket		Water	
pH	4.5		4.5	
Soluble Solids	4.0		3.9	
Color Score	29	(Middle fancy)	27	(Middle fancy)

Table I indicates that soluble solids may have been slightly decreased by water handling. There was no effect on pH or color. Storage temperature did not affect pH, color or soluble solids.

Differences in weight changes and recovery of usable tomatoes as affected by variety, handling method, storage temperature, and maturity are presented in Tables II and III.

Table II indicates that water handled Roma tomatoes showed small weight changes, whereas those handled in baskets decreased in weight. This trend was especially pronounced with the more mature tomatoes and at room temperature for the 64-hour storage period. As for percent recovery, the benefits of water handling was greater for the more mature tomatoes especially at room temperature.

Table III shows that water handled Chesapeake tomatoes maintained approximately the same weight throughout the test, while basket handled tomatoes lost up to 40 percent in weight being most severe at room temperature with overripe tomatoes. The percent recovery was best with water handling at 40° F. with all three ripeness groups, the advantage being greater with longer storage and with riper tomatoes.

It was noted during the experiment that basket handling caused settling of the fruit and extensive leakage occurred. In the water treatments the tomatoes appeared to be well cushioned from shock and showed little damage. After tomatoes were in the water for 48 hours there was some evidence of bursting. Those tomatoes having the best color and most desirable for processing were the ones benefitting most from the water treatments. Underripe tomatoes needed less protection, but yielded a poorer quality product.

1960 STUDIES

The 1960 studies were conducted on a commercial scale, using metal pallet type containers approximately 40 x 40 x 40 inches for the water treatments. These experiments were in cooperation with the Campbell Soup Company, Camden, N. J.

Procedure

Tomatoes of the Roma, KC-146, and Pocomoke were hauled in water tanks and in baskets from Vienna, Md., to the Campbell Soup Company plant in Camden, N. J., a distance of about 130 miles. About 20 hours elapsed from loading to unloading. The tomatoes for the water treatments were picked into baskets and then dumped into the tanks, which had already been filled to a desired level with water. Forty ⅝ bushel baskets or approximately 1400 pounds of tomatoes were used in each water container. A lid was attached to prevent loss of water and tomatoes and to prevent excess movement inside the containers during hauling. A total of five loads were hauled to Camden during a three week period starting in mid August. Each load consisted of 4 water containers plus 27 baskets of tomatoes for comparison with the water treatments.

In addition to variety, other variables within the water treatments were (1) ratio of water to tomatoes, (2) detergent vs. no detergent, (3) addition of chlorine, (4) addition of ice.

Representative samples of both the baskets and the water treatments were graded for quality and weighed before and after transporting. Canned juice samples were prepared at Camden for each treatment. These samples were analyzed later for (1) pH, (2) color, (3) soluble solids, and (4) Drosophila eggs.

SUMMARY OF RESULTS

Ratio of Water to Tomatoes

Three water levels were used in the 40-inch deep tanks for the first load, namely 12, 18, and 24 inches. For the remaining loads, the 18-inch level was used. The 12-inch level was not enough water to cushion the tomatoes while the 24-inch water level tank

TABLE II

Effect of the treatments on weight changes and percent recovery of original weight using tomatoes of the Roma variety

Container	Storage Temp. Deg. F.	Total Weights as % of original: After 16 hrs. and one 30 min. shaking	Total Weights as % of original: After 64 hrs. and two 30 min. shakings	% Recovery of Original wght. After 64 hrs. and 2-30 min. shakings
		Overripe		
Water	40	103	102	87
Water	Room	102	94	63
Basket	40	78	67	43
Basket	Room	79	46	11
		Ripe		
Water	40	102	104	91
Water	Room	101	98	79
Basket	40	88	87	67
Basket	Room	87	59	27
		Underripe		
Water	40	104	103	87
Water	Room	101	99	85
Basket	40	87	84	56
Basket	Room	84	72	34

TABLE III

Effect of the treatments on weight changes and percent recovery of original weight using tomatoes of the Chesapeake variety

Container	Storage Temp. Deg. F.	% Recovery at Harvest	After 3 hrs. and one 15 min. shake: Total Wt. %	After 3 hrs. and one 15 min. shake: Recovery %	After 24 hrs. and two 15 min. shakes: Total Wt. %	After 24 hrs. and two 15 min. shakes: Recovery %
		Overripe				
Water	40	66	100	70	98	72
Water	Room	66	92	70	72	41
Basket	40	66	84	53	75	40
Basket	Room	66	89	61	59	18
		Ripe				
Water	40	89	99	84	98	70
Water	Room	89	100	83	96	65
Basket	40	89	94	82	92	71
Basket	Room	89	98	82	90	54
		Underripe				
Water	40	91	101	89	101	82
Water	Room	91	100	87	99	72
Basket	40	91	98	84	99	81
Basket	Room	91	97	82	88	55

held fewer tomatoes and allowed excessive movement of the tomatoes within the tanks. Further studies are needed to determine the best ratio between water and tomatoes. From observation, however, the best ratio appears to be somewhere between 1:3 to 1:2.5.

Detergents

No data were collected on effect of detergents, however, they appeared to clean the tomatoes during hauling more thoroughly than just plain water.

Chlorine

After the tomatoes had been in the water at about 70° F. for approximately 12 hours, a gas producing reaction occurred. Ten or 20 ppm of chlorine added to the tanks prevented this reaction. After 20 hours only 1 ppm active chlorine remained from the original 20 ppm; none was present in the 10 ppm tanks. Tanks containing no chlorine had a 10,000,000 bacterial standard plate count and a 1,000,000 coliform count after 20 hours. The tanks with 20 ppm chlorine had a zero count and the 10 ppm tanks had a very low count.

Ice

The addition of ice to the water tanks also prevented the gas producing reaction. However, the use of ice would be uneconomical since over 600 pounds were used during this 20-hour period.

Condition of Tomatoes after Hauling 120 Miles

The condition of the tomatoes as represented by grade classes after arriving at the Campbell Soup plant is shown in Table IV.

Tomatoes hauled in water had a higher percentage of good fruit and about 2 percent more were usable than those transported in baskets. From the standpoint of fruit condition, tomatoes transported in water sustained more minor damage, such as slight breaks in the skin, but less moderate and severe damage than those transported in baskets. The tomatoes in the tanks, however, received the most handling since they were picked in baskets and then dumped in the water. Tomatoes hauled in water, however, tended to be more susceptible to damage during subsequent handling than tomatoes hauled in baskets.

TABLE IV

Condition of tomatoes after hauling for 120 miles as represented by grade classes and fruit condition

Grade Class	Percent by Weight		
	Baskets	Water	
Good	73.8	77.4	
Trimming Needed	22.3	18.9	
Present after Trimming		16.2	14.5
Culls	3.9	3.7	
Usable After Removal of Culls and Trim Waste	90.0	91.9	

Fruit Condition	Percent by Count	
	Baskets	Water
Intact	57.1	52.9
Skin Break	5.8	11.6
Minor Crack	4.3	7.1
Moderate Crack	4.1	4.4
Severe Crack	2.3	1.7
Trimming Needed	21.7	18.2
Culls	4.7	4.1

Weight Changes

No appreciable changes in weight were detected in either the baskets or water treatment in this experiment.

Color and pH Changes

No changes were detected in any of the treatments.

Soluble Solids

The water treatments had an average soluble solid of 5.4 while the tomatoes in baskets had an average of 5.7. It thus appears that there may be a decrease in soluble solids due to holding the tomatoes in water. However, this apparent decrease may be due to absorption of water rather than an actual loss of solids.

Fly-Eggs

Fly egg counts were lower in the water treatments (range 0-2) than in the baskets (range 0-31). This may be due, in part, to washing off of eggs during hauling. Of course, eggs could be laid in the baskets but not in the water during transporting.

DISCUSSION

From the standpoint of quality and recovery of tomatoes, water handling appears to have an advantage over handling tomatoes in baskets. This advantage may become more significant with increased efforts to reduce Drosophile contamination and with the need for a bulk handling method for mechanical harvesting.

From the economical standpoint, water handling may also have the advantage, as is true of most bulk handling systems over unit handling. In addition, to recovering more and better usable raw stock, labor costs for loading and unloading would be greatly reduced since such handling could be mechanized.

In transporting tomatoes, the matter of space and weight must also be considered. In water tanks, only about 60 percent of the weight would be tomatoes, while about 94 percent of the weight would be represented by tomatoes if handled in baskets. Thus, if weight was a limiting factor in hauling, a handling system other than water would be necessary. On the other hand, water handling would give more efficient utilization of space. For example, 200 baskets (⅝) of tomatoes stacked in a square 6 feet high would weigh approximately 7,600 pounds. The same amount of tomatoes in water would occupy only a height of 4 feet, but would weigh about 10,600 pounds.

The bulk handling nature of water handling make it a possible system for use in connection with mechanical harvesting. It may be adapted by mobilizing a large pallet-type water container and attaching it directly to the harvester. The tomatoes could then be mechanically conveyed from the harvester to the water tanks. Upon being filled, the pallet tanks could be forklifted to a truck, with an empty pallet being attached to the harvester. Other water systems could also be used, such as a water tank truck following the harvester through the field.

The best size, shape, or type of water container as well as the best ratio of water to tomatoes is not known; however, the results of these studies indicate that water merits consideration as a possible means of bulk handling tomatoes.

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Tomato Breeding for Machine Harvesting

By S. G. Younkin,
Campbell Soup Company

Within the past few months economic changes have occurred indicating that it may become necessary to harvest tomatoes mechanically. Fortunately, the development of harvesting machines has made very rapid progress and it now seems very likely that practical devices to harvest tomatoes will soon be available. Plant breeders have carefully watched these developments because a single tomato harvest demands a very different kind of variety than conventional harvest methods. A few tomato breeders have tried to anticipate these requirements, but most breeders have been reluctant to change their breeding objectives until the problems were better defined.

Limited experiences last year with prototype tomato harvesters strongly suggest that successful utilization of these machines will depend upon the availability of suitable varieties. Moreover, these experiences indicate that none of the varieties now available will meet the requirements. Some pear-shaped tomatoes have been machine harvested in a reasonably satisfactory manner in California, but these varieties are unsatisfactory for most tomato products.

It is unlikely that any two tomato breeders would agree on all requirements of a mechanically harvestable variety. This is perhaps of minor importance because harvesters will improve and appropriate cultural practices will be devised. As these improvements are made varietal requirements will tend to be less demanding. I think that most people will agree that the following characteristics are important in varieties for mechanical harvesting:

(1) Harvest operations must extend over a four- to five-week period.

(2) Profitable yield must be obtained.

(3) Quality of harvested fruit must be maintained at present levels.

Length of Harvest Season

Perhaps the most difficult problem facing the plant breeder is the development of varieties which will provide a harvest period long enough to use existing tomato processing facilities efficiently. If a processing plant has facilities to process 4 percent of its scheduled pack on one day it will obviously have to operate at least 25 days to meet its schedule. Most tomato processing plants operate at least six or seven weeks and operate at capacity for less than two weeks. Processing plants operate in this manner because tomato fruits normally mature over a long period of time. A further complicating factor is that for most areas there is an optimum direct seeding or transplanting date which will result in highest yields. If the crop is planted either before or after this date, yields will be reduced because of reduced seedling survival, increased disease incident, or reduced fruit setting.

Consider for a moment some of the problems one would have with present day varieties if he attempted to supply a plant somewhere in the Midwest with machine harvested tomatoes for a period of six weeks. He would find that the profitable planting period and available early and late varieties would at best permit scheduling deliveries for three weeks in the middle of the required six weeks' season. If he harvested some fields too early and some too late in order to stretch out the season, yields in the field and quality in the plant would be seriously reduced.

Perhaps the ideal situation would be to have an early variety with a concentrated ripening habit and a capability to produce good yields and good quality whether it was planted early or late in the spring. Tomato breeders believe it is possible to develop early, free-setting, disease resistant varieties with a concentrated ripening habit from existing strains. With such a variety maturity could be controlled by use of a heat unit system to schedule plantings. Harvest would be much less critical than with peas and sweet corn if the varieties were crack resistant and disease resistant. Many tomato breeders will be working toward this objective, but will also develop midseason and late maturing varieties because they will be easiest and quickest to obtain.

Profitable Yields

The production of profitable yields using destructive harvest methods demands that varieties have a concentrated ripening habit or that fruits have characteristics such that ripe fruits may remain on the plant for a long period of time without deterioration. If yields are profitable, a high percentage of the fruits should meet quality standards. If a harvest produces 15 tons of good quality fruit and also a similar quantity of green or defective fruit, sorting costs on the harvester will be high and the machine will have to handle large quantities of fruit that are not marketable. It is obvious, also, that fruit size should be large in order to reduce the number of units to be handled by sorters on the machine. If we assume that picking costs are 30 percent of production costs and that mechanical harvesters reduce harvest costs by 50 percent, it is obvious that final yields must be about 85 percent of present hand harvested yields if machine harvesting is to be equally profitable. The figures used here may be inaccurate, but the logic is sound. High percentages of ripe fruit and suitable yields have been obtained in individual tests, but it remains to be determined whether these most promising strains will give similar results under a wide range of environmental conditions. Tests along this line have been too limited to indicate the best sources of concentrated ripening habit. Most tomato breeders are optimistic that suitable breeding material will be found.

Quality Maintenance

Tomato processors and consumers are not likely to permit reduced quality standards while problems of tomato harvesting are being solved. Breeders recognize that quality attributes such as color, flavor and solids must be maintained and that preparatory costs should not be increased. In this connection, much firmer fruits will be necessary to withstand machine picking and bulk handling if losses during transport, washing and trimming are to be kept at present levels. Consideration also must be given to the tendency of fruits to increase in pH and to lose flavor if harvesting is delayed too long after ripening. Eastern processors and growers may continue to want stems removed from the fruit if present grade standards are retained. Strains are known with firm fruit and others are known that are either easy to stem, or have jointless pedicels so that stems remain on the plant. These characters have not been combined with good processing characteristics.

Summary

From this brief discussion it is clear that formidable problems confront tomato breeders. The advent of the mechanical harvester has probably doubled the number of characters that tomato breeders will have to consider in the future. Fortunately, breeding materials are available that are either adequate or at least approach recognized needs so that the problem is one of combining available genetic stocks. If the engineers can devise ways to handle fruits more gently and if horticulturists can devise cultural practices that concentrate ripening, the breeding problems can be substantially reduced. Unless some unexpected development occurs it will probably be four to five years before the first tomato varieties specifically designed for tomato harvesting are available in eastern areas. In California, fruit setting and fruit ripening problems are less serious because of the more favorable climate. For this reason varieties for mechanical harvesting may be developed there more rapidly.

Because of the time required to develop these new tomato varieties, I suppose it is inevitable that harvesters will be used with existing varieties. I suppose that it is also inevitable that growers, engineers and processors will become impatient with plant breeders before the first really adaptable strain is released.

Harvesting Schedule for Tomatoes

By O. C. Zoebisch,
Libby, McNeill & Libby

I wish to confine my remarks to harvesting schedules that we will encounter with mechanical harvesting of tomatoes, not because we know so much about it, but because we do not know enough to plan a foolproof schedule at this time. Answers must be found before mechanical harvesting becomes a reality.

Under the present system of hand-picking tomatoes, we would like to start harvesting in the Midwest approximately August 1 and continue on until October 1, and expect the peak delivery approximately September 1.

For mechanical harvesting there are now some varieties which will lead to a satisfactory harvest in the first and second week of September under midwest conditions. This would vary somewhat in other areas of the country. To fill in harvest for the latter part of the season should be obtainable by various means, but this still needs to be fully demonstrated.

We feel sure that varieties can be developed with later fruit set and this

could be helpful in filling in the latter part of September.

It is also likely that later harvesting dates will be accomplished by later plantings. A two-day delay in planting in the spring results in approximately one day delay harvesting in the fall. This is not always true, nor is it equally true for all varieties. For example, the concentrated maturity varieties tend to ripen about the same time in the fall, even if planted a week earlier or a week later. On the other hand, the conventional varieties now used or the highly indeterminate varieties are more responsive in their reaction to planting dates.

Direct seeding will shift maturity from ten days to two weeks later. This may be a very good way of filling in the balance of the season for mechanical harvesting.

High applications of sidedress nitrogen will also delay maturity, but only a few days.

The mere fact that some varieties can be left on the vine for a week or more after reaching maturity will also be helpful in scheduling the harvesting of tomatoes in the later part of the season.

The big problem, as we see it, is to develop varieties and methods suitable for mechanical harvesting in the early part of the tomato season. Here we can run into all kinds of difficulties and higher costs. High applications of phosphorus and potash will hasten maturity, but only by two to four days, and this is not sufficient to give us a substantial early season harvest. A very high plant population will also hasten maturity by a few days, perhaps up to a week, under certain conditions.

There are certain varieties such as Fireball which are earlier than presently used varieties, but which have other undesirable characteristics, for which reason most tomato canners did not use these very early varieties. We may have to sacrifice the desirable attributes of varieties in order to use such early varieties to gain another few days up to a week of earliness for mechanical harvesting.

Another possibility is to grow some early tomatoes further south in the early spring, and haul the fruit north to the plant. For such plantings we should choose well drained, or even sandy soil, where plantings can be made very early in spite of rain or adverse weather, in order to assure an early crop.

In spite of doing all these things, we do not believe that we could possibly have a full season as we now know it by harvesting tomatoes mechanically in the midwest and eastern parts of the United States. As it appears now, we must be satisfied with a shorter season which will certainly tax our plant capacities.

Drosophila Control

By Dr. C. H. Mahoney
Director, N.C.A. Raw Products Research Bureau

The Special Committee on Drosophila Control met in Washington on December 15, 1960, to evaluate the Drosophila Control Program during 1960 and, on the basis of research work done during the year and industry experience, to revise the Drosophila Control Bulletin for 1961. The Committee consisted of research entomologists in all states where experimental work on control of this insect was being carried out, as well as technical men from the canning industry who carried on extensive tests during the year and evaluated the performance of the recommended control program.

The control program during the past year was quite successful in all areas where details had been diligently followed, and canners who had used the program were very well pleased with the results. In those cases where there were indications that the control was not as effective as it might have been, it was possible to find and determine the cause, which was then corrected. Members of the Raw Products Research Bureau visited most of the tomato growing areas in the East and Midwest during the season to determine the efficacy of the program and where it might be improved next season.

As a result of the 1960 survey it became evident that the field application of either diazinon or aldrin was quite effective for a period of six days in those areas where tomatoes were being grown in rotation with field corn, hay crops and soybeans. However, tomato fields adjacent to peaches, apples, cantaloupes and other fruit crops were susceptible to reinvasion by adult Drosophila from the adjacent fruit crops. Under these circumstances, the field application of pesticides was only effective for three or four days.

It was found also during the 1960 season that the pyrethrum dust for postharvest application should be formulated with 0.1 percent pyrethrins and 1.0 percent piperonyl butoxide. The new Drosophila Control Bulletin for 1961 will be issued in three or four weeks and at that time will be sent to all tomato canners and packers of tomato products. Therefore it will not be necessary to go into any detail at this meeting, but we strongly urge that all canners, with the cooperation of the field department and quality control, formulate a strong control program for 1961 based upon the recommendations of your Special Drosophila Committee.

Washing of Tomatoes and Other In-Plant Practices To Minimize Drosophila Contamination

By B. A. Twigg,
University of Maryland, and
C. B. Denny and J. M. Reed,
N.C.A. Research Laboratories

The control of *Drosophila* should start at the source of egg deposition, i. e., the field, and during subsequent handling operations. However, in conjunction with these control measures, the tomatoes should receive effective treatments in the plant to help reduce Drosophila contamination.

The use of an effective wash has received more attention than other in-plant practices as a means of reducing contamination. Washing studies have been conducted at several locations (1, 2, 3, 4, 5, 6). Gould, Geisman, and Sleesman (2) made the following recommendations from their studies on washing of tomatoes:

"1. Tomatoes for processing should be soaked for three minutes while being vigorously agitated. (It was found that an increase in temperatures of the soak water also increased the effectiveness of the wash).

"2. A thorough rinsing should follow the soaking phase of washing. This rinse water should be fresh water so as not to recontaminate the tomatoes. The fruits should make two complete revolutions while under the sprays. Full cone nozzles, which deliver a square spray pattern, should be placed seven inches above the roller conveyor. (At this height, one square foot of surface is covered when pressure of 130 psi is maintained). There should be, at least, one nozzle for every square foot of surface.

"3. Detergents should be used as an additive when tomatoes from the field have many cracks and when *Drosophila* fly activity is heavy. A concentration of 0.25 percent should be maintained in the soak tank.

"4. The in-plant procedures must accompany good field control practices and good handling methods in order to control the *Drosophila* flies and thus, prevent the tomatoes and the processed tomato products from being contaminated with eggs and larvae."

Siegel (5) made similar recommendations from a study in which he found that tap water plus a detergent, warm water (120° F), or warm water plus a detergent removed more

eggs and larvae than washing tomatoes only in cold water.

It has been reported by the Berkeley Laboratory of the N.C.A. (6) that highly alkaline detergent solutions (pH 12) are much more effective in removing eggs than are neutral or slightly alkaline detergents. Lye solution at a 0.2 percent concentration and warmed gave equally good results. Analysis for sodium on washed and rinsed tomatoes showed no measurable increase due to the use of lye or alkaline detergents for egg removal.

In order to test some of these recommendations under Tri-State conditions, the University of Maryland and the National Canners Association conducted a study during 1960 at a commercial operation in Delaware to determine the effect of water temperature, the use of detergents, and washing time on the removal of Drosophila eggs from tomatoes and on the bacteriological build-up in the wash water and in the resultant tomato product. The study was conducted during the third week of August and repeated the second week of September.

Experimental Procedures

Tomato Lines:

(1) Dry sorting, metal mesh belt approximately 12 feet with five hollow cone spray nozzles (recirculated water from roller belt spray wash) about 5 inches before delivery to soak tank washer.

(2) Soak tank washer with variable speed drive on positive feed helical fin through first 15 feet and a 2 paddle Niagara Washer for last six feet. Steam injection into bottom channel into the feed end of the soak tank. (Tank capacity about 605 gallon.)

(3) Metal mesh bar flight elevator from soak tank to roller belt with six hollow cone spray nozzles delivering approximately 5 to 6 gallons per minute each at 30 to 35 psi.

Washing Variables: Factorial Arrangement

(1) Water Temperature:

A—Low—65° to 72° F. (Tap water)
B—Medium—(100° F.)
C—High—(120° F.)

(2) Detergents (detergent concentration: 0.25 percent first replication; 0.50 percent second replication):

1. Detergent No. I (average use pH at 0.25 percent concentration was about 6.0)

2. Detergent No. II (average use pH at 0.25 percent concentration was about 5.3)

3. None

(3) Retention time:

X—Low—1½ mins.
Y—Medium—3 mins.
Z—High—5 mins.

(4) Overflow rate:

(a) 6 gallons/min. during 100° F., no detergent variable.
(b) 3 gallons/min. during detergent and 120° F. water tests.

Sample Collection and Preparation:

1. Tomato samples were drawn before washing and after washing for each treatment.

2. Product samples were juiced in the commercial extractor after cleansing the extractor with water. The cold juice was first allowed to flush the extractor and one to two buckets then collected for sample preparation.

3. Two quarts to one gallon samples of water were dipped from the delivery (overflow) end of the soak tank and one quart juice samples were dipped prior to heating. These samples were immediately iced for bacteriological examination in the N.C.A. Washington Laboratory.

4. The remaining portions of the juice were heated to 190° F. in a steam jacketted kettle; six No. 303 cans were filled, closed and processed for 15 minutes at 212° F. in boiling water for egg counts at the N.C.A. Washington Laboratory.

5. Twelve ounce bottles of soak tank water were collected periodically for detergent titration by the manufacturer (Fehmerling Associates, Bridgeton, N. J. and Oakite Products, Inc., New York, N. Y.), who cooperated with this study.

Laboratory Analysis:

Egg and larvae counts.

1. Egg counts were made on six cans for each treatment by the official A.O.A.C. method.

Bacteriological tests.

1. Water and product samples were held iced until cultured on the morning following sampling.

2. Samples heated to 180° F. were cultured anaerobically in tomato-liver-soil medium to determine the most probable number of mesophilic (85° F.) and thermophilic (131° F.) anaerobic spores.

3. Samples heated for five minutes at 190° F. were plated aerobically in thermoacidurans agar to determine the number of thermophilic (131° F.) acid-tolerant aerobic spores.

Results

Drosophila Egg Reduction:

Due to small numbers of larvae found in the product, it was difficult to draw any conclusions from this phase of the study. Generally speaking, however, the larvae are easier to remove than eggs, so results for egg removal should hold true for larvae removal. Also no differences could be detected among the three washing retention times.

The effect of using detergents and warm water in the wash tank on the reduction of fly-eggs is presented in Table I.

The above data is in agreement with previous studies (2, 5) in that it suggests that the use of detergents and warm water may increase the efficiency of the washing operation in removing Drosphilia contamination.

Bacteriological Aspects of Tomato Washing Studies

While trying to wash the fly eggs off the tomatoes, we want to be certain that a spoilage problem is not created. Basically, there are only three types of bacteria that are of importance to the tomato and tomato juice canner. The flat sour bacteria called *Bacillus thermoacidurans* or

Table I

The effect of detergents and warm water in the washing tank on the removal of *Drosophila* eggs.

Treatment	Average Egg Counts*			Percent** Reduction.
	Before Washing		After Washing	
Detergents				
No Detergent	126.5	—	32.8	53.6
Detergent No. I	65.6	—	10.4	64.4
Detergent No. II	116.6	—	36.8	60.6
Ave. of both detergents	93.5	—	24.8	62.4
Water temperatures:				
70° F. (Tap)	103.2	—	31.4	49.4
100° F.	126.5	—	32.8	53.6
120° F.	85.3	—	19.3	73.2

* Each figure is an average of 36 determinations.
** Percent Reduction figures are averages of percent reductions for six replications and are not percentages of the average egg counts listed in table.

Bacillus coagulans produces an off-flavor in tomato juice and the can remains flat. Also, butyric anaerobes (so called because of the butyric odor and gas which they produce) are the cause of some economic spoilage in tomato juice. Thermophilic anaerobes (*Clostridium thermosaccharolyticum*) have been reported to cause swell spoilage in canned tomatoes. None of these types of bacteria is of any significance as far as health is concerned. However, a canner can experience great economic loss because of these bacteria.

In our bacteriological surveys in Delaware and Maryland, in cooperation with the University of Maryland, we were concerned with the flat sour, butyric, and thermophilic anaerobe types. Our procedure was first to determine the rate of flow of the tomato through the washer. Next, samples of raw tomatoes leaving the baskets were taken. After a period of time equal to the rate of flow of the tomatoes through the washer the second sample consisting of washed tomatoes was taken, following the final spray wash. Wash water samples were taken between the two whole tomato samplings.

Samples were taken at the start of operations and after two or four hours of operation. At one plant, where the capacity of the washer was 600 gallons, the temperatures could be controlled at 70° F., 100° F., or 120° F. and several tests were made here:

The water was checked at 100° F. and 120° F. to determine if there was any build-up in bacterial spore load by higher temperature. The flow rate was six gallons per minute. The butyric anaerobe counts on the raw product were from 490 to 5,400 per ml. There was no apparent build-up in the spore counts at either temperature either in the wash water or on the washed tomatoes.

Two detergents were checked at three different temperatures. The flow rate was reduced to three gallons per minute to save detergent. There was no apparent bacteriological advantage produced by the use of detergents in the short hold times tested.

At a second factory, wash water without detergents was compared at 70° F. and at 120° F. in a 150 gallon capacity tank using approximately 67 gallons per minute as the flow rate. The results again showed that there was no bacterial build-up on the washed product or in the wash water during a two hour holding period.

One interesting fact was that butyric spores seemed to be easier to wash off the tomatoes than the flat sour spores. In fact, the butyric spores were greatly reduced, while the flat sour spores remained at the same level.

Other bacteriological studies in Ohio have confirmed our findings, concerning no bacterial build-up in warm wash waters, however, the Berkeley Laboratory of the N.C.A. has also conducted tomato washing studies. They have found that if wash water in a flume is heated above 80° F. a bacterial build-up may occur. The bacteria found in the soil in California are known to be different from those in the soil here and this probably accounts for the difference in the results.

The conclusions to be drawn from these studies in the Eastern area are two-fold:

1. No bacterial build-up was produced when hot water was compared with tap water for washing tomatoes.

2. Hot water appeared to be as good as water containing detergents for removing spore-forming bacteria from tomatoes.

Suggestions

On the basis of this and other studies, the following steps are suggested for handling and washing raw tomatoes in the plant to help minimize *Drosophila* contamination.

Inspection

When a given lot or load of tomatoes has many cracked or damaged fruits, it is advantageous to have an inspection operation to remove any fruit damaged beyond use. The removal of such fruit prevents unnecessary contamination.

Dry Sort

The purpose of a dry sort is to remove gross contamination, such as soil, leaves, insects, and unusable tomatoes which would otherwise contaminate wash waters. A wire mesh conveyor belt, or a roller belt, which allows loose materials to be separated from the tomatoes, helps to accomplish this step.

Washing

1. *Pre-Wash*—The purpose of a pre-wash is similar to the dry sort, that is to remove gross contamination. It will remove soil, etc., which may not be removed by the dry sort and otherwise ends up in subsequent wash waters. This wash can be in the form of a spray or a soak tank. Agitation of the water in a soak tank increases its washing effectiveness.

2. *Main Wash*—The tomatoes should be completely immersed and the water well agitated during the main wash. The use of detergents and/or warm water may be of some assistance in removing fly eggs. If warm water is used a careful check must be maintained on bacteriological build-up. Agitation can be accomplished by paddles or by introduction of compressed air into the water.

To help avoid a build-up of contaminants in the main wash tank water, careful attention should be given to the relationship between the load of product, the rate of water replacement, and the length of time the water is used. It is recommended that the tank be drained completely and refilled every four hours and oftener if possible. The main wash tank should have a drain which draws liquid from the bottom of the tank. Overflow at this point will help to lessen the amount of sludge accumulation in the bottom of the tank. Water for the tank can be from low-pressure, low-volume sprays which partially rinse the tomatoes as they leave the tank.

3. *Final Wash*—The final wash with fresh water can include a soak, with agitation, and a high-pressure spray rinse. This is particularly important when detergents are used. Although it may not always be possible to have a fresh water soak at this point, be sure to have a high pressure spray wash giving good coverage. The tomatoes should make at least two complete revolutions on a roller conveyor while under the sprays. Water pressure is very important and should be as high as practical.

Peeling or Trimming

Do a thorough job of peeling, coring, or trimming. Remove all areas of the tomato where eggs and larvae are likely to be attached, and dispose of the trimmings to avoid the transfer of eggs and larvae to clean tomatoes.

Waste Disposal

Trimmings do not offer a serious breeding place for *Drosophila* unless the canning plant is on intermittent operation. The continual addition of skins, wet material, and water to the waste prevents egg deposition and hatching. Waste collected near the plant should be sprayed with residual insecticide.

Note

Good washing and handling practices in the plant are only a part of the complete *Drosophila* Control Program, since these procedures will only remove a portion of the contamination. Other recommendations on field and handling control must be followed along with good in-plant practices.

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A Critical Evaluation of the PROTECTIVE SCREEN PROGRAM

MODERATOR: DR. C. H. MAHONEY, Director, N.C.A. Raw Products Research Bureau

The Experiment Station and Extension Service Viewpoint:
DR. ORDWAY STARNES, Director, New Jersey Agricultural Experiment Station, New Brunswick

The Regulatory Viewpoint:
DR. W. L. POPHAM, Assistant Administrator, Regulatory Programs, Agricultural Research Service, U. S. Department of Agriculture

The Canner and Grower Viewpoint:
R. J. MARSH, Canners League of California, San Francisco
WILLIAM H. SHERMAN, New York State Canners and Freezers Association, Rochester
CECIL R. TULLEY, Northwest Canners and Freezers Association, Portland, Ore.

A Critical Evaluation of the Protective Screen

Role of the Land Grant College in the Protective Screen in 1960

By Dr. Ordway Starnes, New Jersey Agricultural Experiment Station

The grower of processing crops, the processor, the pesticides industry, the Food and Drug Administration, the USDA, and the Land Grant College comprise a team having interdependent responsibilities for the economic production of adequate quantities of quality food. Certain responsibilities are shared to a greater degree than others but all are shared in some degree. Recognition of this team effort is significant for only in recent years have we become sufficiently well organized and communicative to function effectively as a team. The evolution of this team having interdependent responsibilities reflects advances in production, protection and processing technology. Advances made permit and have resulted in increasingly higher standards of performance by all members of the team.

Ironically, however, there is not the desirable relationship between the resultant superior quality-quantity-inexpensiveness of food in the market basket and consumer confidence. Responsibility for dispelling unfounded concern on the part of the consumer in food quality is likewise a common responsibility of all privately and publicly supported agencies involved in pesticide usage. If we meet this consumer educational and public relations responsibility as effectively as we have judiciously used pesticides in the best interests of consumers in 1960, we will have placed the subject in its proper prospective. This activity, too, is a related and important part of the pesticide protection screen.

New Jersey is a small state in comparison to its importance to the processing industry and to the importance of the processing industry to our agricultural economy. Approximately 50 percent of our seasonal crops are processed by more than 30 processors, many of whom operate on a national level. Under these conditions the pesticide program must be the most effective possible and the Agricultural Experiment Station and Cooperative Extension Service assume, as a first priority obligation, activities to accomplish this. Programs with which I am familiar in other states differ only in degree, hence I will present New Jersey's program briefly.

1. *The Basis for Pesticide Usage Recommendations*

Evidence of need for pesticides and their effectiveness rests primarily with the Experiment Station. Certain pest control and pesticide research is conducted in cooperation with many of our processors. In the past much of the research has been under the purview of a research advisory committee comprised of representatives of the processing industry. The pesticide industry collaborated in the conduct of certain pesticide work also.

In addition, a few of New Jersey's major processors and several pesticide concerns independently conduct applied research and data and information with regard to registered and some experimental pesticides is exchanged quite freely.

The majority of the work on the effects of pesticides on product quality is again in the Experiment Stations with a major role also being played by a few substantial processors.

Pesticide residue and pest contamination research comprise a major effort in the Experiment Station with active participation by entomologists, pathologists, nematologists, herbicide specialists, food scientists and chemists. As a related consideration you will be interested in that there are four regional research projects in the nation concerned with pesticide residues exclusively. The northeastern 12 states make up one region in which, since 1956, we have pooled our limited resources in terms of dollars, personnel and facilities on this important problem. The objective is to determine the magnitude of the residue problem following the use of registered and experimental pesticides in practical control under local conditions. In addition, a very few processors and the pesticides industry are accumulating some residue data. This information is all used in

2. *The Construction of Usage Recommendations*

Careful consideration is given by research and extension specialists who jointly prepare recommendations for the use of each pesticide to the following characteristics: its effectiveness against the specific pests in our state, economy, effects on quality, registration for use at the national level and in our state for the particular use and residue potential. Our stated policy is to not recommend the use of any pesticide which will either impair product quality or place one who adheres to these recommendations in violation of existing regulations.

These recommendations are then presented for discussion at a meeting attended primarily by representatives of the processing and pesticide industries, following which they become the Extension Services's official recommendations.

3. *Implementing Pesticide Recommendations*

An understanding of and concurrence in recommendations by all parties, particularly research and extension workers and technical fieldmen of the processors and, insofar as feasible, by the pesticide industry, is

vital to a sound program. In addition to college-sponsored state canners' and fieldmen's meeting, extension specialists appear at preseason meetings sponsored by processors for their contract growers. Extension specialists also meet frequently with pesticide dealers on a district basis over the state, and numerous extension-sponsored grower meetings are held in all important processing crop counties.

As the production season begins Extension intensifies its pest warning service. This service, supplied by the Extension Service, is contributed to by technical fieldmen of the processing and pesticide industries, extension field agents, our state department and the U. S. Department of Agriculture. An important means of avoiding residues is to avoid unnecessary applications of pesticides. The pest warning service as conducted enables timely extension meetings of processors' fieldmen and growers and enables accurate timing of pesticides. Periodic news releases from both processors and the Extension Service of a confirming and complementary nature are supplied throughout the season.

Techniques employed by New Jersey processors to encourage grower compliance with recommendations are predicated on the program developed by this Association and include:

(a) A clause in the contract prescribing procedures to be adhered to by the grower and, in certain cases, pesticides to be used. Essentially all contracts contain a clause prohibiting the use of any pesticide not labeled for use by the Pesticide Registration Branch on the specific crop.

(b) Require the maintenance of a spray record chart indicating pesticide used, formulation, method of application and dates applied on each field, these charts being subject to inspection by authorized persons and to be collected at the end of the season.

(c) Certain processors assume responsibility for the application of pesticides on contracted crops and perform this service and bill the producer for the service at the end of the season.

(d) A most effective technique is frequent visitations by processors' fieldmen with contract growers, in many cases as frequently as two or more times weekly.

The above actions all apply to raw stock produced under contract. Equally effective procedures for ensuring freedom from excessive residues on raw stock procured on the open market are lacking. Apparently every processor requires a certification on the purchase order that the product has not been treated with any pesticide that would result in a violation of existing regulations, a commendable procedure but with grave limitations.

Contract and open market procured raw stock is systematically sampled and analyzed for both residue and pest contamination by those processors contacted. The standard bioassay procedure is used and, when indicated, chemical analyses are performed. You are acutely aware of some limitations of either the bioassay or chemical methods when the raw product is sitting on the platform.

When one considers the relatively short period of time during which a tremendous effort has been invested by all in coming to understand the nature of the pesticide problem and in acting to comply with pesticide regulations, one recognizes that remarkable progress has been made. My contacts in the New Jersey processing industry inform me that the current program is effective. I am convinced that it is also. However, there continues to be noteworthy problems at all levels. In addition to the previously mentioned problem concerning limitations of methods for speedily determining residues and contamination in raw stock, these include:

1. Efficient, economic and non-hazardous chemical or other controls are not available for use against all important pests on processing crops.

2. The need for much more data on efficiency of currently approved pesticides against the specific insects attacking crops and on the magnitude of the associated residue problem is acute.

3. Much of the control and residue data available are based on work with fresh market crops and some adaptation to processing crops is necessary.

4. The quality impairing characteristics of a pesticide, if any, should be ascertained prior to its being recommended as carefully as the magnitude of the residue problem is ascertained.

5. The difficulty of the processor in reconciling varying recommendations between adjacent states continues to be of considerable concern and efforts are being made to overcome this through regional conferences.

6. Cases of accidental misuse of pesticides and pesticide drift on to processing crops constitute infrequent but serious problems.

7. In isolated cases problems result from overzealous pesticide sales efforts, not through their having advocated the use of illegal pesticides as much as through having advocated a more stringent than necessary schedule.

8. Efficient field control is not highly compatible with bean and pea vine, corn, pulp, apple pumice and other by-products utilization.

9. One prerequisite to an effective pesticide screen—a contract with a responsible, cooperative grower—is difficult for the transient processor to meet.

It seems appropriate to recognize here that the role of the Land Grant College in pesticide usage is through research, education, and service. In that the responsibility of the college is to the larger community, many problems of concern to the processing industry, the regulatory agency, and the agricultural chemicals industry are also of concern to the college. But, more importantly, the college with its agricultural experiment station and cooperative extension service bears a particularly close relationship and responsibility to the people, all the people, of the state.

The research, education and service activities of the college are interrelated to the extent that they are virtually inseparable. The first obligation of the college is education but as research provides the basis of the educational program and without which an educational program could not be sustained, it is well to consider first the role of research in the college in relation to this general problem.

For 80 years experiment stations in cooperation with ARS have defined the major pest problems, have determined the biology and ecology of these pests, and these agencies have been the major contributors in the area of non-chemical control, i.e., resistant varieties, cultural, mechanical and biological control. These activities contribute importantly to the subject under discussion. They are the ultimate in control. Unfortunately these activities are not receiving sufficient emphasis primarily because servicing the chemical control program is sapping the resources of experiment stations.

Research in experiment stations played an important role in the development and introduction of new pesticides a few decades ago. Development is no longer a major activity in experiment stations, a fact which does not present a problem as industry has assumed its rightful role. I hope that opportunities for industry never become so limited but that promising materials are coming along continuously.

While I believe the college to have little stake in pesticide development, there are opportunities and obligations for the college in such important areas as determining the chemical, biological and mechanical principles involved in applying these for maximum effectiveness and minimum residue and in determining mode of action as a basis for development by industry of more effective insecticides.

Chemical control is our first line of defense against today's important pests and such research must be conducted as will enable the development of recommendations for the control of pests on important crops in our respective states. This responsibility we cannot delegate as the pesticide must be evaluated under local conditions for

purposes of confirming its effectiveness and magnitude of the residue problem under stated conditions and, further, locally gathered data and experience provide the basis of local acceptance and use. It is the responsibility of the experiment station to provide the extension service with recommendations which, when adhered to, will not place growers and the processing industry in violation of existing regulations. It is Extension's responsibility to promote the use of its recommendations with such vigor and enthusiasm that the user will adhere to these and, further, a most important responsibility of Extension is to convey to the consumer that today's food products are the most wholesome ever known to man and that this is because of, not in spite of, pesticides.

A related challenge is in the recruitment and formal training of sufficient qualified agriculturists in the several disciplines concerned with pest control and chemicals in food. The foregoing are responsibilities common to the Land Grant College in every state. In New Jersey the University, through the Experiment Station, is also responsible for the coordination of the statewide mosquito control program. Problems posed by this program are more related to concern on the part of the public about the widespread use of pesticides than residues. An additional service provided by our college is that of the administration of the state economic poison law.

I am impressed with the importance of our interresponsibilities as opposed to our individual responsibilities. Remarkable progress has been made in the past three years in developing a team, each member of which has a rather clear concept of its individual responsibilities and its responsibilities to the other members of the team concerned with the pesticides protection screen. I am confident that the Land Grant College can and is making every effort to become a more effective member of the team.

Pesticide Registration—Prelude to Safe Use

By Dr. W. L. Popham,
Agricultural Research Service,
U. S. Department of Agriculture

In 1956 the Food Protection Committee of the National Academy of Science had this to say about chemicals:

"No one knows exactly what would happen if the use of pesticidal chemicals on the farm should be abandoned, but it is safe to say that we could not commercially produce apples, peaches, potatoes, citrus, and tomatoes, to mention only a few crops, and yields of many others would be drastically reduced. It seems evident that the American people cannot be fed adequately unless crops and livestock are protected from insects and other pests."

This study was prompted by the Delaney hearings which had attracted much public attention to the use of chemicals in agriculture.

More recently Dean Earl L. Butz of the College of Agriculture, Purdue University, said, "We need to establish by careful and painstaking research the conditions under which chemicals may safely be used in food production or as feed additives. By the same token, we need to establish by research on residues the *tolerance* limits below which no harm results and above which danger lurks . . . zero tolerance negates the very concept of tolerance."

Chemicals are nothing new. We have been surrounded by them since the beginning of time . . . the food we eat . . . even our own bodies are naturally made of chemicals. By probing deeply into the composition of matter, scientists have learned how to synthesize some of nature's chemicals . . . and to change others to make them more useful to mankind. With these tailor-made products available we are realizing benefits and comforts never dreamed of by past generations.

The past 15 years have been a period of phenomenal advances in the production and preservation of raw agricultural commodities, and these advances are due in no small part to the intelligent use of chemicals.

Chemicals are here to stay. You and I know that they have been one of the most powerful instruments in bringing to the consumers of this country an abundant supply of fresh wholesome foods—not on a seasonal basis but every month in the year. There is real substance behind the expression that chemicals are as essential for the efficient production and preservation of an abundant food supply as tractors, improved varieties of crops, and better breeds of livestock. It is little wonder then that the Department is dedicated to seeing that the public—producers and consumers alike—derive full benefit from agricultural chemicals. This, of course, calls for safe use.

The Department has always considered that the safety and wholesomeness of the nation's food supply is its first responsibility in carrying out assignments from the Congress. This principle guides USDA research programs and regulatory and service activities pertaining to foods and to the use of chemicals in food production and distribution.

Are some of the chemicals that have done so much to improve our food supply likely to be harmful to us if minute quantities are present in foods we eat? Certainly we lack evidence to support any such conclusion. As you well know, some chemicals are essential for good health in small quantities, yet highly toxic when ingested at higher levels.

In an article entitled "Are There Poisons in Your Food?" appearing in the February, 1961, issue of the *Farm Journal*, Dr. Frederick J. Stare, one of this country's most eminent nutritionists, who currently directs a research and teaching staff of some 80 scientists at Harvard University, has this to say: "All chemicals are toxic at certain levels. For some, like copper and fluorine, it takes small amounts; for others, like water and sugar, it takes larger amounts for harm to occur. One cannot intelligently define toxicity without speaking of dosage. Neither can one define carcinogenicity, that is cancer-producing properties, without speaking of dosage. And dosage implies not only amount but time: *How much and how long?*" I would urge that you read the article. It is brief.

It is reassuring to have a man of Dr. Stare's stature in the field of nutrition speak out in an authoritative way on this subject just now. But it is up to us—you as processors and distributors of food and we as research and regulatory people—to keep it that way.

Twenty years ago industry was producing some 50 basic chemicals for use on farms. Now this number is well in excess of 200. In total volume about 90 percent of the farm chemicals were not available in their present form at the beginning of World War II. Any such expansion as this —in any field—inevitably leads to some problems. The principal one in the case of agricultural chemicals seems to be opportunities that exist for misuse.

There is no better way to maintain consumer confidence in our food supply than for you in industry to have confidence in the products you sell. By advising farmers on how to use pesticides safely, you are developing spray schedules based on properly registered formulations and the recommendations of responsible research agencies.

The livestock growers are pursuing a similar course. The results of these efforts are most gratifying. In my opinion this is the way to get the job done. Your efforts along these lines will do far more than all the policemen that could be put in the field.

The Department of Agriculture's contribution to the total effort begins with research aimed at developing new, more effective, and safer pest control procedures. Beyond that it administers the Federal Insecticide, Fungicide, and Rodenticide Act of 1947, including the Amendment

passed in 1959, which brought nematocides, plant regulators, defoliants, and desiccants under similar regulation. To meet the requirements of this Act, pesticide labels must bear directions that give adequate protection to the public. The Department interprets this to mean that the prescribed pattern of use not only protects the user but also avoids injurious residues in or on food and feed. Registered patterns of use must serve as an authoritative guide to the person who uses pesticides to protect his crops from the ravages of insects and diseases. This preclearance approach to the residue problem is good. It gives maximum protection to the consumer, and it gives producers, processors, and distributors of food more precise guide lines for assuring the safety of products they place on the markets.

As you are well aware, legislation governing the registration of pesticides was strengthened substantially in 1954 when Congress passed Public Law 518, commonly referred to as the Miller bill. This amendment to the Federal Food, Drug, and Cosmetic Act gave the Department of Health, Education, and Welfare responsibility for establishing safe tolerances for pesticides that may remain as residues on raw agricultural commodities. It assigned to the Department of Agriculture two specific responsibilities:

(1) To certify to the Food and Drug Administration that a pesticide is useful for the purpose covered by a petition for a tolerance and,

(2) To submit to the Food and Drug Administration, an opinion as to the amount of residue likely to remain in or on food or feed at time of marketing if the chemical is used as instructed on the label.

Registration of pesticide uses is the initial step in our entire scheme of protecting food from harmful residues. We must place great emphasis on sound labeling. When a registration is found faulty, immediate corrective action must be taken. We look to industry for full support in this regard.

Obtaining registration for a pesticide is not easy. Only a few of the hundreds of potentially useful chemicals ever reach the market. Those that do must meet strict standards of safety.

It may take a manufacturer three to five years to determine that a particular chemical has a useful place in agriculture. Frequently State Experiment Stations and the Agricultural Research Service take part in these studies. For those that show promise a treatment schedule is developed. Then the company must determine what residue, if any, will remain on a crop at time of marketing if directions for use are followed. In my opinion this is a sound preventive approach to our problem.

If a residue remains, when directions for use are followed, responsibility passes to the Food and Drug Administration to determine the level of safety. The manufacturer must submit convincing evidence that the chemical has a useful place in agriculture when applied in a manner that will not result in residues in excess of established tolerances. Once these determinations are made, a registration is granted.

Once a pesticide has met registration requirements, a heavy responsibility shifts to the people using it. The need for following instructions on the label cannot be over-stressed. No agricultural product has ever been seized because of chemical residues when pesticides were applied according to directions on registered labels. Again, we need to keep it that way.

In looking to the future we ask your cooperation on two counts:

(1) If a registered pattern of use, when applied according to directions on the label, fails to control the insect or disease for which it is intended, the label needs to be changed. We want to know about it.

(2) If any pesticide, when used according to directions on the label, leaves a residue in excess of an approved tolerance, we want to know about that too.

Both situations call for prompt action. Any information you furnish will contribute to sound registrations.

During the past few months we have made an exhaustive review of our registration files as a basis for issuing a revised "Summary of Agricultural Pesticide Chemical Uses." This volume will include typical patterns of use that meet the requirements of the Federal Insecticide, Fungicide, and Rodenticide Act. In general it will set forth the maximum rates of application and the minimum time intervals between treatment and harvest that have been accepted for registration on a nationwide basis.

The Summary will list tolerances and exemptions from tolerances established by the Department of Health, Education, and Welfare. Supplements to the Summary will be issued from time to time as new chemicals and new patterns of use are accepted for registration.

Listings in this Summary are not to be regarded as recommendations. In developing spray schedules you should seek the advice of federal and state research agencies.

In closing I should like to repeat that chemicals in agriculture are essential production tools. If we are to continue providing the food that we need, in the variety and quality we want, we have no present alternative to the use of chemicals. In my opinion we have the competence in industry and government to see that pesticides are used to great advantage to all—without harm to anyone.

The Protective Screen in 1960 and Program for 1961 for California Processing Crops

By R. J. Marsh,
Canners League of California

A year ago almost to the day the National Canners Association submitted to the industry its recommendations concerning grower use of pesticide chemicals. This was the signal for the state and regional canning associations to review existing chemical control practices and to take the necessary steps in each area to implement the N.C.A. Protective Screen.

The Canners League recognized its responsibility for safeguarding California's pack of canned fruits and vegetables which amounts to almost one-third of the nation's total. Additionally, this state produces large packs of frozen fruits and vegetables, practically all of the nation's dried fruits, and a large portion of the fresh fruits and vegetables shipped to markets throughout the United States.

Many of our crops utilize several of these market outlets. It became apparent that to provide the best protective screen in California a high degree of coordination would be necessary in the activities of organizations representing all of these outlets. The League therefore sought the cooperation of the California Freezers Association, the Dried Fruit Association of California, and the California Grape and Tree Fruit League, all of whom approved the basic steps recommended by the N.C.A. and then worked together on a common program.

A strong six-man Pesticide Committee was formed representing scientists, crop specialists and others experienced in dealing with growers. The Committee was given authority by the League's Board of Directors to develop a California program based on the N.C.A. suggested program. Standard forms which I will describe for you were prepared to carry out each of the N.C.A. recommended procedures. It was felt that this would be of great assistance to each of the canners who otherwise would have to develop their own forms, and would also insure uniformity in the material each canner presented to his growers. Moreover, the League's forms were designed so

they could be used by any of the cooperating organizations for any of the crops.

Because of the large volume and the perishable nature of most of the produce, it was considered impractical to go into a program based solely on residue tests on the produce delivered by the grower. Instead, the program emphasized and the supporting forms were designed to guide the grower in treating the crops in a way which would leave no doubt as to their acceptability.

I will not take the time to describe all of the forms which we developed to carry out each detail of the program; however, a few merit discussion. First, there is a Commodity Sheet for each of the crops handled by the four organizations, ranging from apricots and almonds to zucchini. These Commodity Sheets list all of the registered pesticides permitted to be used on the particular crop. They also list the Food and Drug tolerance, or absence of tolerance, and a summary of the USDA use limitations for each of the pesticides. Each form carried the warning that without buyer's permission to deviate, the restrictions shown on USDA registered labels must be observed. Our dependence on reliable up-to-date pesticide information provided by USDA's Regulatory Program Division is obvious.

The second form developed was the Pesticide Treatment and Crop History. This was designed for use by the grower in recording all of the pesticide treatments to the crop.

The third form was a Pesticide Chemical Rider which, simply stated, required the grower to comply with the instructions on the Commodity Sheet and to keep a record of the pesticide treatments on the Crop History form. More importantly, it gave the buyer the right to reject the crop upon proof of excessive or improperly timed pesticide applications, even though there existed a possibility that residues, if any, were not in excess of those permitted.

In regard to this last described form a little history is appropriate. In 1955, when the Miller bill became effective, the Canners League on advice of counsel changed all of its buying contract forms to include a guarantee clause, the effect of which was to assure the buyer that the produce, when delivered, would not have pesticide residues in excess of those permitted by FDA regulations. Residue tests by canners were necessary for its enforcement. Those not using the Canners League standard forms were urged to include such a guarantee in their own contract forms, and since that time these guarantees have generally been used in California. Many canners believed that because of the magnitude of the job, they might not be able to safeguard their packs by reliance on a guarantee enforceable only by actual residue tests and, therefore, it seemed desirable to develop the Rider as an alternate method of control. A separate form of Guarantee by Seller was developed to be used in purchasing produce from dealers, such as fresh shippers or persons who buy crops on the tree. This form contains the Seller's guarantee that only approved pesticides have been used in accordance with USDA limitations. It also requires an accompanying completed Crop History form.

Several other forms, which I will not describe in detail, were developed to facilitate reporting by fieldmen, notifying growers, etc.

In order to acquaint everyone concerned with the program a "Food Conference on Pesticides" was held in Berkeley, March 17, 1960. Co-sponsored by the League, the freezers, the dried fruit packers and the fresh shippers, with the cooperation of the National Canners Association, this conference brought together representatives from the entire food industry, including the University Extension Service, farm advisors, agricultural commissioners, the USDA Pesticide Regulation Branch, California Department of Agriculture, chemical supply houses, pesticide applicators and growers' organizations. Following the pesticide conference the details of the program and samples of all of the printed material were given the widest possible distribution among the various industries. Copies of all of the forms and material were sent to every agricultural commissioner, farm advisor, and all of the university personnel involved in pesticide work and many others too numerous to mention. These basic forms were and continue to be supplemented by bulletins giving everyone concerned notice of any changes in either the League or government regulatory programs.

By this time all of you are wondering how our program was received. Every report to reach me has indicated excellent grower cooperation. Our forms were sold and distributed in immense quantities not only in California, but to many canners in other states. Of course, not every canner used every single form provided. Some canners continued to rely on the guarantee, but at the same time required their growers to complete the Crop History form. Many canners used the program in its entirety and were happy to report that while some growers needed help in completing the Crop History forms, there was no resistance to following the instructions and keeping records.

Because of the heavy reliance on commercial pesticide applicators in treatment of processing crops in California, problems involving control of application rates, timing and record keeping were further simplified. Some difficulties arose in dealing with members of growers' marketing associations. As a rule, no general Food and Drug guarantee was given by an association. Two such associations reported that all their grower members were provided with the Commodity Sheets and Crop History form and advised to use them, and in one instance, the association adopted a rule for its members, which, in part, states that: "Member should not use any 'economic poison' as defined in the Federal Insecticide, Fungicide, and Rodenticide Act other than (1) those shown thereon, or as amended to comply with governmental requirements; or (2) as otherwise agreed in writing with the * * * Association and its customers. Member should, when requested, furnish canner to whom his crop is delivered, on the crop record form attached, an accurate statement of the pesticide treatment of his crop. * * * There is attached and made a part of this letter (1) a general information bulletin; (2) a schedule showing permissible pesticides, the Food and Drug Administration tolerances, and the USDA usage limitations; (3) a pesticide treatment and crop history form. Members are advised that the *restrictions shown on USDA registered* labels must be observed. This letter and enclosures should be made a part of your permanent records."

Considerable difficulty was experienced with some of the shipping houses because of the problem of completing the Crop Histories on commingled lots. However, in doubtful cases, residue tests were possible, which made it unnecessary to reject any of the material.

A number of other problems arose during the processing season. In several instances the University Extension Service, in its recommendations to growers of various crops, suggested applications which were at variance with the USDA limitations on dosages or timing. Most of these were minor. By means of the fieldmen's reports, some over-applications or applications too near harvest time were revealed. Fortunately, residue analyses showed that residues were well within the tolerances, and so far as we have been able to ascertain, no grower had any produce refused because of excessive residues at harvest time. We believe this stands as testimony to an effective and practical program.

Another problem encountered was the difficulty of keeping up with new registrations and USDA limitations on dosages and timing. Chemical supply houses on several occasions were out in the field advocating the use of materials for which information had not yet been released by the USDA. It is hoped that in 1961 a method of obtaining such information more quickly can be established.

It might well be stated here that any success we have achieved is in great part due to the farming communities' confidence in the posture and reliability of the U.S. Department of

Agriculture, the California Department of Agriculture, Food and Drug officials, and our University and Extension Service personnel. But this confidence can be sustained only if these agencies recognize the practical problems confronting the users of agricultural chemicals. We need technical information sufficiently in advance to inform and educate our growers and fieldmen. Furthermore, every effort should be made by state and federal agencies to achieve conformity in pesticide regulations. Along this line I am glad to report that the California Department of Agriculture recently adopted regulations including tolerances almost paralleling those of the U. S. Food and Drug Administration. The need for conformity was also stressed in a special report to Governor Brown which I will mention later.

Another problem encountered was drift resulting from application of pesticides by aircraft. Contamination of alfalfa by drift from DDT being applied to tomato fields was a serious hazard, and the use of another pesticide became necessary. The one selected was Sevin. However, a new difficulty arose. A Food and Drug tolerance for this material had been established on ensilage and forage, but no tolerance had been established for alfalfa. Despite frantic efforts, it was impossible to get this material cleared for alfalfa. However, growers apparently found a way of surmounting the difficulty as it turned out that worms did not become a serious problem on tomatoes.

In order to study these and other problems Governor Brown, in June, 1960, appointed a 15 member special Committee on Public Policy on Agricultural Chemicals. The charge to the Committee by the Governor was to suggest "A compatible policy, sound and considerate of all points of view and the highest public good, one which will serve as a safe guide to all our agencies, whatever their disparate responsibilities in order that the total of our effort will promote the maximum of public benefit."

Chaired by Dr. Emil M. Mrak, Chancellor of the University of California's campus at Davis, the committee consisted of recognized experts in nutrition, public health, medicine, agriculture, and the food and chemical industries. Representing the food industry was George Gooding, vice president, California Packing Corporation. Public hearings were held, and over 30 informed witnesses presented statements including Milan Smith, President of the National Canners Association. Mr. Smith described at some length the N.C.A. Protective Screen and outlined details as to how it was being handled in California by the Canners League. I would like to quote from the final report submitted to Governor Brown on December 30, 1960.

The section titled "Food Industry and Agricultural Chemicals" states the following:

"Consumer favor, the food industry has found, is maintained by controls over the products being packed and processed. The food industry early realized the importance of avoiding excessive chemical residues in processed fruits and vegetables. It instituted measures to insure that farmers who supplied it with produce followed recommended pest control practices.

"The dairy industry, the dried fruit industry, the frozen food industry and the canning industry now maintain extensive systems of checking for pesticide residues. In the past year these control measures have been greatly expanded.

"Because the proper use of pesticides, additives and other chemicals in agriculture is initially the concern of their users, the committee invited testimony from those who, on a day to day basis, must observe the protective restrictions already described. The state's canning industry was selected for study and witnesses were invited to appear before the Committee.

"The canning industry recommended development of a policy which could be adopted by other states and which might serve as an example of coordination and cooperation among agricultural industries and federal, state and local governments.

"The industry program aims at preventing the contamination of raw products with unsafe chemical residues, the processing of any contaminated raw products and at protecting against the addition of illegal chemicals during processing.

"Although canning is not the largest segment of California's food production industry, it was considered of special significance inasmuch as:

"1. The canner deals with the proper use of chemicals both in agriculture and in the final processing and packaging of foods as they reach the consumer.

"2. The canner contracts for his raw product with independent growers, and therefore has special need to work out methods of collaborating closely with these growers and with pesticide applicators to assure himself of suitable raw products.

"3. California, as producer of one-third of the nation's entire supply of canned fruits and vegetables, exports these products to other states. The California canner must therefore be familiar with and responsive to the regulatory programs of the federal government and all state governments.

"4. As a producer of labeled consumer goods, with the source readily identifiable to the consumer as well as to government officials, the canner is responsible not only to law but also, and in large degree, to public opinion.

"It follows also that the canning industry program must rely on:

"1. The continued coordination of California's State Departments of Agriculture and Public Health with their federal counterparts which helps assure the reliability and acceptance of any program, and

"2. Cooperation given the canning industry by University of California and Extension Staffs in the major canning areas.

"Commodity directions listing the chemicals for each crop registered for use by the U. S. Department of Agriculture together with the USDA's approved dosage and usage limitations are distributed to growers and fieldmen. Industry forms and records, which implement current state and federal regulations on the subject, were filed with the Committee.

"In summary, the program comprises methods of informing and educating both individual growers and individual canners on their responsibility at all stages of agriculture and processing from soil preparation through the disposal of cannery waste; systematic means for recording and reporting all utilization of chemicals; and inclusion in all procurement contracts of provision for automatic rejection of raw products if unapproved chemicals have been applied or usage or dosage limitations exceeded." * * *

And from the conclusions I quote the following:

* * * "The public should be provided continuous, full, factual, authoritative information concerning the laws and regulations, their enforcement, the safeguards which are in effect to protect the consumer, as well as the occasional difficulties in the use and control of pesticides. This should be done because a fully informed public can evaluate facts and will not be panicked by 'scare' stories." * * *

* * * "The great preponderance of evidence presented convinced the Committee that at this time our food supply is safe. No evidence is presently available that there is any danger of anyone being poisoned by pesticide residues in food." * * *

Finally, with respect to the need for conformance in pesticide regulation and improved federal-state cooperation, the Committee recommended:

"That the USDA provide federal-state liaison machinery to coordinate pest control suggestions for use made by state agencies, and to bring to their attention any variation from accepted registration criteria."

Furthermore, the Committee recommended "all agencies dealing with chemicals in food production and processing should be brought together, at least annually. * * * This conference should review and make recommendations to resolve differences between state and federal statutes, regulations or policies."

We feel sure that this vote of confidence resulted from the evidence presented as to the efficacy of the N.C.A. Protective Screen as implemented through the League's voluntary chemical control program. In order to merit this confidence it is evident that our efforts must be continued and intensified and consideration should be given to making the public aware of the extensive steps being taken by the processing industries to insure the safe use of pesticides on our food crops.

After reviewing the operation of our 1960 program, the Canners League and the other cooperating organizations have decided to carry on essentially the same program in 1961. The Crop History form is being simplified as much as possible. All of the Commodity Sheets are being brought up to date and will be reissued. It had been planned that all of this material would be in the hands of our printer by January 1 to assure early distribution; however, some difficulty has been experienced in bringing all of these Commodity Sheets completely up to date.

Another food conference on pesticides is planned March 17. We are working hard to reconcile any conflict between our Commodity Sheets and the recommendations of the University Extension Service. Our Committee members will be called upon to attend numerous meetings to explain the program to growers, farm advisors, commercial pesticide applicators and other groups. We look forward to a continuation of the good record made last year.

Pesticide Spray Residue Program in New York State 1960

By William H. Sherman,
Secretary, New York State
Canners and Freezers Association

The basic rule for success, we believe, for any new or expanded program for farmers and processors is to make sure all involved understand the reasons behind such programs and the economic importance to each.

For some years now, we have stressed to our fruit and vegetable growers the importance of using only those spray materials which have been approved by the College specialists at Cornell. They in turn have been guided to some extent by Food and Drug tolerances, although many of their recommendations were based on extensive tests at the College.

Almost without exception, our Fieldmen's Conferences for the past five years have laid heavy stress on the wise use of insecticides, fungicides, and herbicides. Cornell's College of Agriculture for many years has published annually a complete set of recommendations for growers to follow.

When the so-called "Cranberry Scare" came along a little more than a year ago it served to bring into focus the extreme importance of this residue problem and it served further to bring about an elimination of any careless or irresponsible practices which were taking place.

In order to intensify the program which was already in effect by the College at Cornell and the State Extension Service we devoted an entire day at our Annual Fieldmen's Conference last February to this important topic. This was, we felt, the number one step in acquainting our fieldmen and growers on the intensification of efforts to follow all recommendations to the letter.

Following the Fieldmen's Conference our Association's Agricultural Committee mapped out a suggested procedure for all processors to follow in 1960.

It was suggested that a clause be added to the 1960 contracts which would state in effect that the grower signing the contract had not treated or would not treat the crop with any economic poisons which were contrary to label directions and that the crop would be grown in conformity with all further federal and state pure food laws. While there is a question in the minds of lawyers as to whether growers could be held responsible in the case of seizure of processed products, the clause did much to emphasize to growers the extreme importance of following approved recommendations.

The Committee urged all processors to send a letter to each of their growers outlining the procedure the company planned to follow in assisting growers with their pesticide programs.

Processors were urged to furnish growers with simple spray charts on which pertinent information could be recorded during the season. A suggested sample was sent to processors and most used the form recommended. Others modified this to suit their own needs.

Processors were urged to make certain all growers had complete information on spray schedules and materials. This information was available through the Extension Service in each county. Materials had already been placed in the hands of our fieldmen at our Fieldmen's Conference.

Fieldmen were urged to work closely with County Agents and Extension Specialists. All fieldmen were advised to urge those growers who did not already belong, to join the County Extension Service.

Meetings with growers were suggested for each company. A great many followed this suggestion which made the recordkeeping request much easier to "sell". Many processors also met with spray dealers to make certain the materials being furnished growers had been approved.

Fieldmen were urged to contact their growers frequently to assist them in following correct recommendations and in recordkeeping.

Each processor was urged to provide each of his growers with a list of approved materials, including the common trade names.

Companies were asked to make sure there was a close working relationship between fieldmen, quality control, and top management.

It is not enough to recommend these procedures if there is no follow-up. The Committee followed this with further reminders and suggestions. As a result every processor and grower was acutely aware of the importance of this program.

Not every company followed every suggestion but we are certain that every company, no matter how small, did something. Some firms had rather elaborate programs, others were fairly simple. But all were aware of the importance of *some* type of program.

The response by growers was almost unbelievable and yet it shouldn't have been. Extension and Cornell and Geneva specialists had been doing an excellent job with growers for several years and when it came time for the additional recordkeeping most growers were well "conditioned" and went along with the program with very little fuss. There were a few who refused to keep the records but almost without exception they were the marginal growers, and processors were not too happy to lose them.

We cannot emphasize too strongly the excellent spirit of cooperation which existed between the processors, county agents, the College, spray dealers and the growers. It was this spirit which made the program work. No one group could have done it alone.

In reviewing the experiences recently with our Agricultural Committee there was complete agreement that the program was easier to sell than anyone had anticipated.

A few comments are worth repeating. Some processors felt the length of time for the lab tests to be completed for certain materials held up approval for too long a period at the peak of the season. This was particularly true with companies handling multiple products at the same time.

It was felt that with the records which are now available from each grower it will be possible another year to take fewer samples and make spot

checks where records indicate there may be a possible residue hazard.

Some felt growers were "over-sold" or "over-scared" in the matter of residue hazards and quit applying certain poisons too soon. As a result quality suffered somewhat in such instances.

The problem of taking a representative sample, especially in an orchard, needs investigation as a research project.

Companies feel the program has given them considerable data on each crop that is very valuable and plan to continue to request this information in the future.

The Food and Drug Administration was very active in this phase of consumer protection this year and a great many samples were taken at the plant as the product was received, after washing, and as a finished product. Numerous samples were picked up at receiving stations and at the farm. Records were carefully checked. We know of no problems in our state in regard to excessive residues for 1960.

We plan to continue a vigorous program in our state in 1961.

The Canner and Grower View of The Protective Screen

By Cecil R. Tulley,
Northwest Canners and
Freezers Association

A discussion of the type we are having today is extremely valuable to the industry. Not only does it increase our awareness of problems related to the production and processing of safe and wholesome food for consumer use, but it also causes us to pause in a re-evaluation of our purposes, our methods and our success. From this bench mark we can then more clearly outline our program for the future. We can strengthen the weak points, view the strong points with satisfaction, and prepare to more effectively meet the challenge of serving the public interest without loss of efficiency.

The Protective Screen Program was carefully worked out early last year and was quickly disseminated to the industry so that it could be put in motion at the farm level before extensive contracting of raw products had taken place, and before farm pesticide control plans had been completed and first applications made. This required translation of the program at the state or regional association level into terms of direct application to the job of supervising and policing the production, harvesting and delivery of the crops to be processed. Immediately following the National Convention our Association set up a technical task committee to spell out the specific recommendations which we might confidently expect would provide the needed protection. Fortunately, at least two of our national brand members had already spent weeks in preparation for the 1960 season, and our committee was given free access to their program outlines and statements of policy. Our recommendations were completed and disseminated to the entire fruit and vegetable processing industry and to grower groups, experiment stations, extension service, and others in the Northwest during February and early March by means of a series of five area meetings in Idaho, Washington and Oregon, followed by an extensive mailing of the program recommendations.

I shall not burden you with the technical details of our program which are quite well known in the industry. It should suffice to say that it was based on the suggested program of the National Canners Association, with such refinement and amplification as would give the individual processor a blue print from which to shape his program, plant by plant, in the local areas. Our committee felt that the wide variety of crops, scattered production areas, extreme range of size of operation and diverse methods of procurement required a flexible program that could be readily adapted to these conditions. Therefore, we did not completely standardize our procedures and did not print standard forms for industry use as did some associations. On the other hand, we did insist on adherence to the basic principles, and provided ample suggestions as to how to put these principles into effect.

In conformance with the N.C.A. program, our program was built around obtaining uniform grower compliance by means of grower education activities and assumption by him of contractual responsibility with the processor; the checking of compliance by careful field supervision throughout the season and the maintenance of complete pesticide application records; limitation of pesticide usage strictly in accordance with USDA registrations, except where further limitation was required by the processor; and sufficient residue analysis, where needed, to remove any reasonable doubt that tolerance requirements were being met.

In the procurement of certain commodities, particularly of fruits, berries and some vegetables, modifications of these basic requirements had to be made to fit circumstances in which the processor did not have contractual control of the crop during the growing season. Tonnages purchased after "the crop was made" presented difficult problems of compliance. Such crops may be purchased directly from the grower, or through a broker or handler. A purchase may be the product of one grower, or may be the pooled production of several growers. After a careful evaluation of such situations, procedures were developed by which grower and/or broker (handler) affidavits of compliance would be obtained and written records of pesticide usage established. The effectuation of such procedures required extensive publicity and a number of conferences with handlers and representatives of grower groups, particularly in the fruit areas.

From the outset, Northwest processors obtained remarkably good cooperation from growers. When informed of the limitations and the reasons for them they showed little reluctance in signing the pesticide riders to their contracts or other evidences of contractual responsibility. The state research and agricultural extension people, and also the representatives of the agricultural chemical companies, were of invaluable assistance in the educational work among the growers necessary to the maintenance of strict control. The rural press, farm magazines and other publications also lent willing and valuable aid.

These were the principal elements of our program. The question which logically follows is, "How good was the industry's performance?" Not content with relying on their own experiences, our Raw Products Committee developed an analytical questionnaire this winter and mailed it to members of the Association. By this means information was obtained on the programs and results obtained from 52 processing plants in Oregon, Washington and Idaho.

The survey showed that, almost without exception, the processors had carefully followed the principal elements of the protective screen program. In so doing, eight out of ten had done something significantly different than previously in relation to pesticide control. The remainder followed programs which had been in effect for one or more years.

Activities relating to grower education and record keeping were extensive. More than half the plants held meetings with growers of selected crops or all crops purchased. This becomes particularly significant when it is realized that in the Northwest growers are extensively organized into commodity and industry groups, cooperative bargaining and selling groups, extension education groups and others, all with means of disseminating information. In certain areas, such as the pea processing area of eastern Oregon and eastern Washington, the processors have complete control of the application by air of the pesticides used on the crop. Despite

these variations, 85 percent of the plants reported they had provided growers with written lists of pesticides for use on their crops. The method of handling records of pesticide applications varied considerably with crops produced and the amount of direct supervision of production by processor fieldmen. However, seven out of every ten plants reported they had furnished growers with forms for recording each pesticide application. Nine out of ten required their growers to keep written records of pesticide application. In other instances the records were made by the fieldmen.

Nearly eight out of ten of the plants revised their 1960 contracts with growers to more specifically cover pesticide usage and residue level compliance. Many used special forms for recording or evidencing compliance when crops were purchased after "they were made."

At the outset, it was recognized that it would be extremely impracticable to sample and test each delivery of raw produce for pesticide residue as it was received. Reliance, therefore, must be placed primarily on the effectiveness of field control of the use of agricultural pesticides in accordance with approved procedures. Despite the practical necessity for such reliance, more than half of the plants reported they had taken and analyzed samples of raw product for residue where any doubt existed that it was within the required tolerance. Forty-three percent went further and also analyzed samples of the finished product, and a third of the plants analyzed samples of the waste product for residue.

How effective was our program? Well, the survey developed one clue. Ten percent of the plants reported that they had rejected some raw product because of improper use of agricultural pesticides. The deliveries involved were infinitesimal in relation to the total volume of raw product processed in the Northwest; yet this action is in itself a strong testimonial to the careful supervision and persistent vigilance exercised by the industry during the year.

How do our members feel about their 1960 programs, and what do they plan for 1961? While 92 percent of plants reporting believed their programs to be reasonably or completely adequate, 59 percent said that increased effort would be exerted in 1961. The Committee received many valuable comments and suggestions along this line that will be passed on to the membership but are too extensive to report here. Most of these are concerned with intensified grower educational activities and improved record keeping during the coming season.

Officers Elected by Other Associations

CANNING MACHINERY AND SUPPLIES ASSOCIATION

President—William E. Vaughn, American Can Company, New York City; vice president—Robert A. Sindall, Jr., A. K. Robins & Co., Inc., Baltimore; executive secretary-treasurer—W. D. Lewis, Washington, D. C.; assistant treasurer—Jeanne Savin, Washington, D. C. (all reelected).

THE FORTY-NINERS

President—Edward E. Judge, *The Canning Trade*, Baltimore; vice president—Charles E. Schick, The Creamery Package Mfg. Co., Chicago; secretary-treasurer—Louis E. Kibler, A. K. Robins & Co., Inc., Baltimore (reelected).

YOUNG GUARD SOCIETY

President—David J. Nay, Selected Spices, Inc., Detroit; first vice president—A. W. Dutcher, Dulany Foods, Inc., Fruitland, Md.; second vice president—Mel Whitman, Food Machinery & Chemical Corp., Seattle; third vice president—W. H. Ross, Holly Hill Citrus Sales Co., Davenport, Fla.; secretary-treasurer—Herb Shek, H. S. Crocker Co., Inc., Baltimore (reelected); recording secretary—Arthur J. Judge, *The Canning Trade*, Baltimore (reelected).

OLD GUARD SOCIETY

President—Fred M. Moss, Idaho Canning Co., Payette, Idaho; first vice president—D. W. Reynolds, Reynolds Preserving Co., Sturgeon Bay, Wis.; second vice president—Dr. Fred W. Geise, Country Gardens, Inc., Milwaukee, Wis.; secretary-treasurer—John Dingee, Haddonfield, N.J. (reelected).

ASSOCIATION OF CANNERS STATE AND REGIONAL SECRETARIES

President—Charles R. Carry, California Fish Canners Association, Inc., Terminal Island; vice president—Richard E. Reed, Maine Sardine Canners Association, Augusta; secretary-treasurer—John J. Tolan, Pineapple Growers Association of Hawaii, San Francisco.

Convention Publications

The Information Division again was responsible for the compilation and publication of the official Convention Room Directory and official Program. These publications were prepared in Washington and distributed on the opening day of the Convention.

The Directory, printed by the Chicago Convention Bureau, carried needed information as to locations of the various Association offices of both N.C.A. and C.M.&S.A., as well as an A to Z directory of firms and individuals in attendance, and classified sections of canners, brokers and buyers, and supply firms and exhibitors.

The Program presented details of each of the program agendas for the various sessions and a day-by-day time schedule of all events.

CANvention News

One of the innovations at this year's Convention was the publication of *CANvention News*—a daily news sheet made available every morning at each floor of the Conrad Hilton Hotel, as well as at the Registration and Information Centers.

The first issue, prepared in Washington, was mailed in advance to the N.C.A. and C.M.&S.A. memberships. Thereafter they were prepared and published in Chicago each day. They covered the daily events of the Convention and were useful in recording room changes, late arrivals, winners of attendance and door prizes, election of officers of the various groups, and other highlights of each Convention day.

Copy was prepared by staff members of N.C.A. and C.M.&S.A., and the newspaper was edited and produced at night in the Association's Press Room and Duplicating Section.

FISHERY PRODUCTS PROGRAM

PRESIDING: JAMES L. WARREN, R. J. Peacock Canning Company, Lubec, Maine, Chairman of the N.C.A. Fishery Products Committee

A Debate: Free or Controlled Trade in the International Market

CHARLES P. TAFT, Counsel, Committee for a National Trade Policy
O. R. STRACKBEIN, Chairman, Nation-wide Committee on Import-Export Policy

CHAIRMAN WARREN: Gentlemen, I'd like to welcome you all to the annual Fishery Products Program breakfast.

This seems to be the age of the debate. This Fishery Products Session is going to go along with the age of the debate. As you know, we have here today a debate on free or controlled trade in the international market. This subject is of particular interest to us as fish canners. Some of us are in favor of a free trade policy and some of us are in favor of a controlled policy with its resultant tariffs. To further complicate the situation, some of us are in favor of free trade policy on raw materials but we want a controlled policy with the tariff when it comes to the finished product, so this makes the subject all the more important.

Another thing that makes the subject quite timely is the fact that our Administration is only a few days old and we are all quite anxious to see what action the new Administration may take in respect to world trade.

To present the case for free trade we have with us today Mr. Charles P. Taft. He is a well-known son of the 27th President, a brother of the late United States Senator Robert Taft. He is also a very distinguished statesman, a lawyer, and a churchman in his own right. He was a former mayor of the City of Cincinnati and I might mention that *Fortune* magazine stated that when he was the mayor he was one of the nine top mayors in the United States and that his city was considered to be the one with the best government in the United States.

At the present time he is counsel for the Committee for a National Trade Policy and he is very well qualified to present the case for free trade.

To state the case for controlled trade we have Mr. O. R. Strackbein. He is the founder and Chairman of the Nation-wide Committee on Import-Export Policy. Mr. Strackbein has served as a trade commissioner abroad with the Department of Commerce from 1924 to 1930 and later he was with the US Tariff Commission as an expert on the study for domestic valuation for tariff purposes. At the present time he is the Chairman of the Nation-wide Committee on Import-Export Policy of industry, agriculture and labor.

So I feel that we have two gentlemen here to debate who are both very well qualified on this subject.

In regard to the format for the debate: Each person will be given an opening statement of from 25 to 30 minutes. Following the opening statements they will be given 10 to 15 minutes rebuttal. Then following that, we will welcome questions from the audience in regard to the debate.

Inasmuch as this is quite an important subject, we are recording the whole program so that it may be made a part of the Convention Proceedings.

At this time I would like to present to you Mr. Charles P. Taft.

TAFT: Mr. Chairman, Mr. Strackbein, gentlemen: I have one other past history that I perhaps had better add, that at one time I represented the National Canners Association in Cincinnati.

I'm afraid I have to start by correcting, however, at least one of the statements that your Chairman made. The Committee for a National Trade Policy is not for free trade. We have been saying this for a long time and I assure you that if I should advocate free trade, which I don't, a number of important members of my board of directors would promptly resign. The one who would probably have done so first, during the days when he was one of our directors, is Chuck Percy of Bell & Howell, who is definitely not in favor of reducing the tariff on photographic goods coming into the United States, but is in favor of competing with them where they are and not increasing them. In fact he even accomplished the very surprising result of inducing the photographic association to stay out of the fight or effort to get rid of or emasculate the Reciprocal Trade Agreements Policy. So we are not for free trade but we are for a trade policy in the national interest, and this is the explanation of the title of our committee, the Committee for a National Trade Policy.

If you put quotas on Dutch cheeses, as was done, a specialty item imported in an infinitesimal quantity in relation to the total of the cheese market in the United States but shot at because it does stick out as a specialty item, you promptly bring about the result that Holland stops buying our wheat, partly as a reprisal and partly because at that stage it did reduce the amount of dollars which they had to spend in the United States.

So all that we say is that you must look at the entire picture, when you come to a particular item which is involved in the entire balance of trade between two countries.

Our committee is associated with a great many national and regional organizations. When the last fight was up in 1958 we discussed the matter, in a small committee, with Lyndon Johnson in the Senate when the bill had reached there and the committee consisted of a representative of the Farm Bureau, of the AFL-CIO, the League of Women Voters and ourselves representing the business community. The United States Chamber has always been pretty solidly on our side and was even more solidly in 1958. We have overwhelming business support, not only big business, but big business *and* small business of all kinds right across the country. I think we still have the largest membership among American business firms of any of the committees which are operating in this general field.

For the first time in 1958 a majority of the business witnesses who appeared before the Ways and Means Committee and the Finance Committee were on our side of the scrap. We have had wholehearted Administration support.

All of us are guessing, as your Chairman already indicated, what is going to happen. There is no question about the attitude of those in the State Department, and I think it is of some significance that the papers announced yesterday that the president of Borg-Warner, International, was appointed as Assistant Secretary in charge of International Affairs.

On the Congressional front, in 1945 when I first had anything to do with the general argument, we got in the critical vote of the House of Representatives seven votes from the Republican side. In 1955, ten years later we got 67 votes and at that stage the Democrats had gone down from 207, down to 140, so we needed to get the extra 60 votes in order to get it through in 1955, and in 1958 we got 108 Republican votes on the critical votes in the house, the first time we

had a switch, a majority of Republicans, a switch in a period of 13 years.

Now, I want to say that in 1947 with the Marshall Plan we set out to restore the production of the free world, and we succeeded. This was done. Well, I'm sure there was a great deal of altruism. I wouldn't want to discount that at all. I think it is discounted too often, but it was also in our own interest, and it is without question that this operation in Europe that undermined the efforts of the communists to seek control in many of those countries where even now they have 23 percent of the vote, or something like that, in France and have run certainly that high and maybe higher in Italy. I don't mean they are all communists, but they voted on that side as the alternative that seemed better than what was offered elsewhere, and the Marshall Plan stopped that and it restored the production of all of those countries.

We have succeeded, and that is the reason we have produced again a competitive world situation. I don't know what you call normal. It is hard when you start figuring what is normal. You have to head back to 1914. Until very recently I have always been amused because the farm states were the ones that rowed with my father most between 1909 and 1913, but the parity which the farmers have taken has been based on 1909 and 1914, which is a very interesting kind of reversal over a period of nearly 50 years.

We are back, I say, to a normal kind of competitive situation and American business is not used to it. We have had a completely open market around the world because nobody else could provide enough. We have now reached the situation where not only within our own country we have now got enough means of production so that we can produce all that we need and all that most of the world needs too, but so do some of the other countries, and this means that we are probably on a plateau for some time which has been described in years past as profitless prosperity. I hope it isn't quite profitless. In fact, I am sure that it is not, but certainly this is the condition that American business is up against and I think it is a tribute to the foresight and conviction of American businessmen that the total amount of new construction in the course of this next year is going to hit very close to $35 billion which was the record during the last one or two years.

We are, therefore, in a competitive enterprise system. There may still be some places where there are administered prices. In the electrical industry they are certainly going to be very careful hereafter and I suspect that many others will be in the same spot. However, the fact still is that when my city of Cincinnati wants to buy salt, they still get identical bids, and New York City does, too, I guess, and maybe some others. So there are a few around, I am not saying there are not, but in general we are in a competitive system.

I was talking to Ed Thomas of Goodyear in March when I spoke up there at the Rotary Club, and I asked him about his situation. We referred to rubber tires, bicycle tires coming in, and his plant in Providence, Rhode Island. He said he was having tough import competition. I said, "What did you do?" He said, "We met the prices and then we went to work to find out how to get the cost down." I submit this is the way a competitive enterprise system ought to operate. It even operates in the fishing industry. I clipped this out on January 9 out of *Barrons:* "Now the American fisherman nearly have halved their costs by using lightweight nylon nets instead of traditional methods." They didn't do that first. The first thing they did was come down and yell in Washington. Believe me, they made plenty of noise, too. I understand that others who can tuna fish are just as satisfied to get it from Japan, but I think you would be satisfied if your own domestic industry cuts its costs. So we are in that kind of system.

The balance of payments is something that I want to touch on as quickly as I can because it is at the heart of this whole problem. The balance of payments is not the same as the balance of trade. It is *not* the same as the balance of trade. The balance of payments includes a lot of other items besides imports and exports. That this is not understood I can prove to you by the fact that if you watch the papers carefully, you will still see statements issued by people who should be responsible, that say that the balance of trade is against us.

The balance of trade has not been against us for a great many years. In the year 1959 it reached the lowest point in a good many years and the excess of exports over imports was down close to $1 billion. I am talking now about merchandise exports and imports, not the foreign aid or even subsidized agricultural exports, gifts or whatever. The difference was this year, although the figures aren't out, something between $4 and $5 billion. In other words, the increase in the surplus of trade during the year 1960 was between $3 and $4 billion.

The balance of payments deficit, the total balance of payments deficit in 1959 was only $3½ billion. So that on the face of it, the increase in our exports should have put us back even again, but instead of that we are out $3½ to $4 billion still. So it is a fair question to ask what happened, and I have been asking it, and nobody so far as I know has told this country what has happened in clear, simple language. What has happened is that the difference in the interest rate has stirred up not foreign balances which we have been told to worry about for so long by Mr. Strackbein among

CHARLES P. TAFT

others, not foreign balances, but American owned hot money which has sought the highest interest rates that it could get coming out of American corporations.

This was registered by the Treasury as $2 billion that they could identify as early as the first part of December of last year, and there is an additional item described as unrecorded transaction and this one is up to $1.3 billion. So there is $3.3 billion that people had on deposit in the United States and sent over to London and Paris and Bonn, and to Berne in order to get more interest.

Where does that put you? Well, it puts you in this sort of situation. You better look around to find out how much hot money there is at any time: that is fluid, short-term investment money, because the other figures haven't changed. The amount of foreign aid hasn't changed. The amount of foreign investment hasn't changed in 1960. The amount paid for soldiers abroad hasn't changed in 1960. There are various other items of this sort, but those are the three biggest items. They run between $1 and $2 billion each, so that the total is $7 to $8 billion, perhaps, on that kind of foreign expenditure. They have not changed and what has changed is the hot money. So that I am pretty much of the opinion, before you have seen all the figures and before you can prove it, that this is solely hot money and there is a limit to the amount of it that is available for that purpose. Also, the interest rates have changed. Germany cut the discount rate from 4 to 3½ percent within the last week and all the foreign banking systems have cooperated in trying to stop this sort of interchange.

I think it is clear that this is one pressure which is going to prevent the

present Administration from going through with the Democratic platform which promised low interest rates. They are not going to do it, I don't think, because they are artificial and the minute you do that, you immediately encourage some more of the same.

In the meantime a lot of speculators in gold are active in a very limited market, very thin market. The amount of free gold that can be used on the London market is very limited and the minute you've got a limited supply, as soon as you get speculators that begin creating an artificial demand—it is artificial in that sense. There are people that like to hoard gold and that isn't an artificial demand exactly, but nevertheless the pressure on the limited market is what runs up the price in the free gold market in London. As soon as you get that thing you get people demanding gold and who buy gold and more of it. Therefore, it goes up, but even that has to be limited in the end by the facts of the situation and I am submitting to you that that is the major element involved. If you want to keep this thing right, you still have to keep the fiscal policy sound. You've got to keep pretty close to the balanced budget. You've got to provide a continuance of support and this depends on sharpening of production, productivity, et cetera. It means more automation. It means a continuance of the construction of—if not new plants, because that seems to be unnecessary—but at least the modernization of plants in order to be sure that we continue to compete.

We are competing. Talk about being priced out of the world market is nonsense because if this increase in exports continues the export of manufactured goods, which have been in the past as high as four times the import of manufactured goods and is still certainly twice, someplace between twice and three times the imports of manufactured goods.

There are some areas, obviously, where we are having very tough pressure on profits because of the competition which pushes the prices down. One thing that I noticed within the last several weeks, I think it came before the plea of guilty of the electrical manufacturers, but General Electric got one of the public dam bids at only 10 percent above the foreign bid. There is a provision, you know, under the "Buy American Act" if it is 6 percent, it goes to the domestic and if it is in a high unemployment area, the percentage is increased to as high as 12, and General Electric was only 10 percent above. Their bids over the past—as far back as I can remember—were 50 percent above and this is simply demonstrating what many of us have been saying constantly to Congress, that all the fears about this and the idea that you can't compete have come out of a situation where you haven't gotten your pencil out to get your cost down the way you have had to do all the way along in some of the hot competitive areas in our own domestic economy.

In wages—I don't doubt that Strack will talk about that—there have been a good many kinds of presentations in the course of the last six or eight months, but there is no question that the wages abroad are going up at a faster percentage than they are at home. Now, that doesn't answer the question. I argued during this whole last campaign when I was making speeches for Mr. Nixon that you could not operate on a purely percentage basis. You have got to get a combination of percentage and absolute. So I'll give you a little on the absolute. You cannot even on the absolute hourly rates take just the hourly rate and I'll show you why.

Here is a table on the question of fringe benefits. In Italy the fringe benefits are 74 percent of the hourly rate. You can't take the hourly rate, obviously, in Italy. Now, that's the highest, I'll agree. In the Netherlands it is 30 percent. In France it is 51½ percent. In West Germany it is 44 percent. In Belgium it is 31 percent. In Switzerland it is 15. United Kingdom—14. Sweden—15. And the United States—20. So that here is where the competition will continue irrespective of fringe benefit, but the ones that are taken as the lowest hourly rate as far as Europe is concerned are the ones that in fact by reason of fringe benefits are far higher than is represented to you and we are still able to compete with them from the United States.

Now, it is suggested often that people are putting plants in foreign countries in order to be able to ship back to this country. A lot of smart people tried to do it in Japan and one of the reasons that there was such an outburst of blouses that flooded this market and several other items in the same field was that they started to do this and got caught with an oversupply and dumped it, from the American owned production facilities in Japan, and it has not continued, in a number of those items which were the worst.

On top of this, this is not a problem just of the United States where you get a dumping of a particular small item, because blouses or ginghams or velveteen, as far as the textile areas are concerned, are not an important, large item in the textile production, but they disrupt the market and create a lot of hard feeling and bad will and quite a bit of unemployment. Not too much, because velveteens, which I remember were shouted about very largely, only employ about 1,200 people in the United States anyhow. Ginghams and blouses perhaps more, but still a pretty small proportion.

There has been a study going on in GATT which was reported on in November and which unquestionably will come up with some generally accepted limitations, accepted by everybody, so this kind of operation will be curtailed. And that is the way it ought to be gone at, not by putting on quotas for ourselves or even by getting the other country to put on voluntary quotas, which has been done in the case of Japan. It is better to work this out on a multilateral basis with all the countries involved and GATT has been the principal agency for working out this kind of appropriate adjustment. It is through GATT we have primarily secured the withdrawal of the restrictions put on since the war by various countries in order to protect their balance of payments. This is an agreement under GATT. They are permitted to do this. In doing this they found protection and when they didn't need it, it took a very tough push in order to get them to take it off. But actually in fact they have taken it off in many cases, not all of them. We are still applying that kind of pressure and must continue to do so.

I think this covers most of the major items that I wish to cover, but I want to end up with just one or two things. The proposals that are made to meet this situation by the protectionist side have been in general on the theory that you were going to put on quantitative restrictions. They are not satisfied, most of them, with the tariff. The tariff, if anybody can go over it and come in, it can still be competed through. But when you come to quotas, this is an absolute restriction after you get up to a certain point and they are very difficult to administer. They run out in the tight quotas within a period of a month or six weeks. Everybody is jamming in on the first of July and then the quota is all gone and it stops for the rest of the year. This is no way to manage. Quotas, nevertheless, are the ones that have generally been sought. The idea is to create these restrictions, expand at home and invest your surplus abroad. This is all very well, but you put on the restrictions and you immediately start to produce reprisals, and you get restrictions on the other end and you don't get them off against your goods. It just simply does not work.

As far as the investments abroad are concerned, the overwhelming majority of them have been put in foreign countries to get behind their tariff and restrictive walls. They were put into the Common Market because the Common Market is moving to cut their tariffs by 50 percent in the course of the next two years, a little more than that, perhaps the next five years, and that means that they get less and less between themselves and they put up a common tariff against the world on the outside. And I assure you with Europe as our largest market—Canada perhaps comes close, Latin America all put together comes close; those are the three big markets we have—but Europe is extremely impor-

tant because it is to Europe that we ship manufactured goods—and they will not go in there when the Common Market gets into full effect unless we can negotiate the tariff down, and at the moment we have almost no authority at all. The bill which was passed in 1958 provided for 20 percent —5 percent a year for four years and by the time the Tariff Commission got through with the examination of the peril points, that was shrunk to 4 percent. You can't negotiate much with the European countries with only that much to deal with, so we are up against a very serious proposition and it is because of this that many countries have put plants inside Europe in order to be sure they retain the markets they now have.

In other words, this is the operation of the free enterprise system around the world. Are we for it or aren't we for it? We talk about it and yell like the dickens about socialism, but when it comes to our own business we want to be comfortable and divide the markets and have the prices set, so you don't have to worry about tomorrow. Which are you for? That is what I would say to you and other American businessmen. Some are used to competing and some are not. Which side are they on? And it seems to me that is the simple issue in the whole controversy.

CHAIRMAN WARREN: Thank you very much, Mr. Taft. Now I'll call on Mr. Strackbein to present his side of the case.

STRACKENBEIN: Mr. Warren, Mr. Taft, members of the fish canning industry: You have heard a wonderful peroration on what is not supposed to be called free trade but which nevertheless follows those principles. But in order to lay before you a view that may conflict in some aspects with what has just been said, I shall begin not with a disavowal of my organization's protectionist—whether my organization is protectionist or whether his organization is free trade—but simply try to lay before you the situation in which the United States finds itself today, the producers, the farmers, the fishermen, the miners, the workers.

After 27 years of tariff reduction under the so-called reciprocal trade program, the United States today stands as one of the low tariff countries of the world. They are so situated that only a few have a lower average tariff than this country. We have reduced the protective effects of our tariffs by a full 80 percent during this period of time.

Now, Mr. Taft himself has said that during this long period the United States was seldom in a normal economic position. Therefore, with these tariff reductions, first there was rearmament. Then there was the war. Then the defense expenditures. So that American industry had a natural protection, particularly during and after the war. Our industries were supplying not only our own market but other countries. So that the fact that we had reduced our tariffs was really beside the point. There was no one to compete with us.

Since the war with the build-up of these foreign countries and their industries, these other countries have come into position to compete with us and, of course, they are doing so and it is only now, only in the last two or three years, that this new competition has come in upon us in a manner that we have never experienced before in our history.

It is true that even ten years ago there were industries that found some of the competition coming in from abroad very injurious and very difficult to meet.

Now, the economists, the academic economists usually say that if an American cannot compete with imports it therein automatically indicts itself of inefficiency. Now, that is a very strong statement. It is nonetheless a statement that is repeated throughout the country by the economists that graduate from our universities. It is the view held by the Department of State, and yet I want to ask you—Mr. Taft has talked about our free enterprise system and our free markets. We have no freedom of competition today as it was visualized by Adam Smith, the founder of free trade, or at least one of its great spokesmen. The factors of competition generally recognized in economics are not only raw material and land and the supply of capital but labor.

Labor is the great element in the cost of production. There isn't a product made in which labor is not at least 85 percent of the cost of production. Now, I mean by cost of production the cost of mining, if it is a mined product, that goes into the finished product, the cost of farming, the cost of transporting it, the cost of reshaping it and finally assembling it into a finished product.

Now, that element in the American economy has been put outside the bounds of competition. The American producer is not free, and I do not say that he should be free, but he is not free to compete in this one great, predominant factor. He cannot say to his employees, "I am sorry, we are experiencing very tough import competition. We are going to have to reduce your wages by 10 or 15 or 20 percent." Oh, he might say it, but you know how far he would get.

Now, it has been said, not only here today, but elsewhere, that foreign wages are coming up more rapidly than our American wages. That might be true. And yet, supposing you take the wages of Japan at 20 cents an hour and double them. What do you come out with? You come out with 40 cents an hour. Yet an increase of 20 cents an hour in this country would be less than 10 percent increase. Yet in the case of Japan it would represent a 100 percent increase.

As for your fringe benefits. Our fringe benefits by themselves are higher than the total wages in a number of these other countries.

So to say that the United States is not outpriced because we still export, and to say that American business can compete if it is simply cost conscious I think is a flight from reality.

Now, it has been said also that the shipments that we make abroad now are still in excess of our imports, and that is true. It is true that we are exporting more goods than we are importing. In 1959 the difference was only about $1 billion. In 1960 our exports have gained, have exceeded our imports by some $4 billion; but if you analyze the exports, you will find that in considerable part they are not private commercial exports. We have our military exports. We have our exports under Public Law 480 which is an agricultural act which permits us to supply countries for foreign currencies which never see this country, or we actually send goods abroad in the form of grants in aid which are outright gifts. Then, on top of that, we subsidize our cotton and wheat exports and some others to the extent of about 30 to 35 percent of their value. Cotton is subsidized to the extent of 6 cents a pound and the world market is about 25 cents a pound. We were subsidizing cotton at 8 cents a pound for a year. Did we not subsidize this cotton I don't think one single bale would leave the United States if other countries could supply the demand.

The same with wheat. We subsidize wheat at the rate of some 60 to 65 cents a bushel. That is again some 30 to 35 percent of the value in this country. If we did not do this, Canadian wheat would supply the demands of the world instead of American wheat.

This fact that we are stimulating our exports by these synthetic methods shows what our trade would be in the absence of such methods. If we strip from our exports these subsidies and these grants-in-aid, these sales for foreign currency, the United States would be in a deficit position.

Now, then, someone might say, how is it that we export at all if we are overpriced? Now, let's see whether we are overpriced. We have certain measures. One, cotton and wheat, agricultural products. They say, that is because they are price supported in this country. They are price supported, but they are price supported on the basis of so-called parity. Parity with what? Parity with industrial products, and most of these items are actually below parity at this time. Now these agricultural items which are below parity in relation to agricultural products, if they are some 30

to 35 percent above the world prices, then what can we conclude about our prices on industrial products?

Then again, as for the exportation to Europe, to Canada and Latin America. Canada as a country is our number one best customer and, of course, that is easy to understand. Latin America represents about 25 percent of our export market. Then there is Europe and, of course, that is a combination of European countries which is the most important single area to which we ship. But more and more of our imports are coming in in the form of finished or semi-finished products, and the combination is now about two-thirds of our total imports, and that is where the real difficulty comes in. With the billions of dollars of modern machinery and equipment that we have shipped abroad in the last ten years, partly under the Marshall Plan and the ECA and ICA, whatever the letters may have been at the time, this vast volume of machinery and equipment has been installed in these countries. It is operating and it is producing. The productivity abroad as a result of the installation of all this machinery plus machinery of their own, which they are manufacturing very effectively and in many cases ship to this country, give effect to the low wages.

You know, it was always said in the past, "Yes, we pay higher wages in this country than they do in other countries," and that is true. It has been true since the $5 day instituted by Henry Ford during World War I or thereabouts. But they said, "We are so much more productive per man hour that we come out with a lower unit cost," and I am sure in the mass production industries this was true. In the automobile industry, for example, if they paid five times as much or ten times as much as they did in other countries because of our mass production industry, mass production system, we did come out with lower cost but once our own machinery and technology moves abroad so that they have a tremendous leap in productivity as they have had and will continue to have, then these low wages do take effect and they do create a tremendous competitive advantage.

If in this country the textile industry pays ten times as much as they do in Japan, if in Japan they have modern textile industry supplied by the United States, in some cases more modern than some of our own mills have, would it not then be expected that Japan could do what she is actually able to do, import our raw cotton, manufacture it in Japan, ship it to the United States, pay whatever small duty there may be on these products, and still undersell us at a price below our own cost of production, let alone any margin for profit? There should be no surprise about it. I am surprised that people are surprised. They shouldn't be surprised. We did this. We did it with our eyes open. The chickens are coming home to roost.

Now, the question is, what do we do about it? Just as Mr. Taft says his organization is not for free trade, my organization and those who subscribe to its principles are constantly referred to as high tariff people. We are not high tariff people. I have said it more than once, and if I could touch a button and have all tariffs go up 5 percent or 10 or 20 percent, I wouldn't touch the button because I do not believe that is the way to shape or adjust your tariff.

I would use the tariff in particular instances or a tariff and a quota to be shaped to meet a particular situation with a particular product, because not all competition stands on the same feet. Not all industry in this country is equally competitive. We have industry ranging all the way from more or less the hand die or craft stage up to the most highly mechanized production perhaps in the world. So each industry and each product must be studied, but then if it were found in any particular case that as a matter of fact foreign production is below ours in cost, for reasons easy enough to explain, and if the imports did not represent dumping but the regular commercial prices, then the industry in this country is entitled to have a reasonable measure of protection because not only does this industry use American materials in many instances—not in all instances—but it gives employment to American citizens, provides purchasing power, provides taxes to the government—goodness knows the government seems to need taxes—and there is no present prospect of any great decline in that direction. Not only does that industry do these things, it is burdened by laws enacted by the Congress of the United States with burdens that it cannot shift to anyone else, and these burdens are cost burdens. You have your wage and hour law; you have your obligatory collective bargaining; you have your high taxes as a result of the cost incurred during World War II, and the defense expenditures subsequently. You cannot in good conscience expose such an industry to destruction, destruction which has come to it through no fault of its own.

So you say, well, go ahead and improve your methods. Now, this is to say that there is no competition within this country that forces you to improve your methods. Anyone who says that evidentally is not acquainted with American industrial scene. There is plenty of competition in this country. There may be some exception of some large corporations that may conspire from time to time on prices and perhaps have some collusive bidding, but we have the Department of Justice there to see that that is not carried out. We have since 1890 striven in this country to guarantee fairness of competition. Yet, when imports come from the outside, what fairness are we assured of in those instances? Does the Sherman Antitrust Act apply across the waters? Of course it doesn't. Is there any way of confronting the fact that perhaps these goods were produced under sweat shop conditions? Of course there isn't. Does our collective bargaining extend across our borders? With the exception of Canada, of course, it doesn't. So we—our industry, our agriculture, our labor—are confronted with a type of competition that they can't do anything about. They can't reach this competition.

Now, it is true that some of the economists of the AFL-CIO say that the way to meet this situation is not by increasing our tariffs or by imposing a few quotas here and there. The thing to do is to bring up foreign wages or to use the General Agreement on Tariffs and Trade, that wonderful organization that sits in Geneva and presumes to regulate our foreign commerce in place of Congress—that we should use this instrumentality to bring up foreign wages.

Now, I cannot understand how, for example we could bring up the wages in the Renault automobile factory by making some agreement in Geneva. There is no hold, no handle, not anything by which you can accomplish this. So the idea that we can somehow bring up foreign wages so that they come up with our own to me is like chasing after a rainbow because in the first place wages in this country will continue to go up unless I miss my guess. So the idea that we must wait here until foreign wages come up to us is a pipe dream. It is not in the cards, and if anyone can show me how this may be accomplished, I would be delighted to be convinced.

Now, the question of our factories moving abroad. Not actually moving abroad—our factories are not moving abroad. Some of them are simply decaying here, but the transfer of more and more capital to other countries. Mr. Taft has mentioned here the gold outflow and he has given a novel explanation which I would like to see documented, but in any case, the outflow of gold is nothing more than a symptom. Of itself it is meaningless. It is a symptom and it is a final reflection of something that did not happen overnight but which has been building for 25 years.

If the investment climate is such that if you have $500 million as a corporation or $300 million or $50 million or $10 million, and you felt that you could get a better return by investing that money overseas than in the United States, all factors considered, I am sure that you would invest it overseas rather than expanding in this country. Now, that accounts for our foreign investment and there is nothing against foreign investment unless it is done as a substitute for investment in this country.

Where is this growth supposed to come from that you heard batted back and forth over the airwaves this summer? This growth? We are lagging, they said. We are lagging behind Europe and Russia in growth. We will do about 3 percent a year. Some of our European countries are doing 8 percent, 10 percent a year. Why? Number one, as I told you just a few minutes ago, they started from a lower base. It is like pouring water into a tapering glass. The first ounce will bring it up so far, the second ounce not so far, and the third ounce still less. We already have tremendous productivity in this country as admitted by all hands and it is not as easy, of course, for us to increase this across the board as it is for those countries lagging to come up, particularly when we have furnished them with machinery and technology that might have taken them 25 years to develop on their own. So it should be no surprise.

But now that this has happened, here are some of the American firms, their plants have been expanded over the past decade so they have accumulated some surplus and this country with some foreign competition coming in the outlook is not as bright as it was, but they have some disposable income. Do they build a plant in Arkansas or Mississippi or Oregon or Idaho or Maine? Under what circumstances would they do this? They have done it in the past. They have surveyed this state and that state in America, in many areas, and they have located, will locate plants all over the country. They still make the surveys but the competitive climate being what it is, they find if they go to Europe or to South America or to Canada they will have a better return on their money. So that is where they go.

Now, as long as the investment climate in this country is less bright, has a poorer outlook than the investment climate in other countries, including the political instability of some of these foreign countries and the possibility of expropriation and revolutions, in spite of all that, in spite of all that the investment climate abroad must look better in many instances than it does in this country.

Now, we should then ask this question, why is this the case? Is there anything that can be done about it? We say this. There is something that can be done about it. If this industry is exposed to foreign competition that it cannot meet because of the low wages prevailing abroad and because of the increased productivity abroad, we should to that extent protect our market, so that when the production comes off the line you can dispose of it in this country or in other countries and compete.

We maintain that it is more important to be able to sell your goods on the home market than to compete in Afghanistan or Burma or wherever it might be. Again there is nothing against exporting. It is a wonderful thing. The import and export trade makes for a healthy economy if they are in balance and if the factors of production are really competitive. We feel that today the factors of production are not competitive, that the United States producers are burdened in a manner that producers in other countries are not burdened and, therefore, we are working under a handicap that is unfair and that there is a way of remedying this. This does not consist of cutting out import trade, but regulating the flow, controlling the quantity and seeing to it that it obeys the laws of fair competition just as we have undertaken in the last two generations to do in this country.

CHAIRMAN WARREN: Thank you very much, Mr. Strackbein.

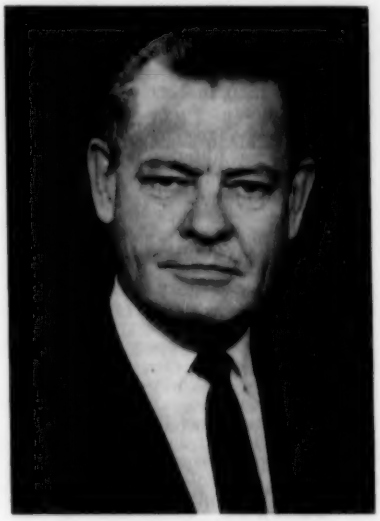
And now Mr. Taft will be called upon to give his rebuttal.

TAFT: Mr. Chairman, Mr. Strackbein: I think I was careful in my language. I am sure you gathered that I made the point that Mr. Strackbein is for quotas. No wonder he doesn't like tariffs. Competition continues with tariffs. With quotas it stops, and his organization particularly is in favor of quotas, not just a few here and there. You ought to see the bills that have been introduced in the Congress of the United States to establish quotas, and many of them drafted by his organization, and this covers the waterfront, I assure you. It isn't here and there.

We are a relatively low tariff country. The figures are fudged a little when compared with Great Britain. They include in tariffs of Great Britain restricting imports what really are taxes on oil and tobacco, because they don't produce those. They don't produce oil and tobacco. Those are lumped with the tariffs, often, but by the time you take that out Britain is down with us as well as the large trading countries except Germany and France, and France and Germany have made more progress in the direction of more liberal trade policies in the last few years than anybody else.

When Mr. Strackbein speaks of natural protection developed by reason of the period of the war and right after the war when they didn't have production abroad, I must say I can't help being a little amused. This is not what he said when he testified before the Ways and Means Committee in 1945 and 1955 when this was up for renewal.

We have heard exactly these same things for at least 15 long years, all the predictions of disaster and what was going to happen and hasn't happened. I think I stated to you quite frankly we are now in a new competitive situation. I agree with that. But these predictions were made in those days as to what was going to happen immediately and didn't happen.



O. R. STRACKBEIN

Academic economists don't exist. They have all served time in government. They have had to give answers to government officers quickly. They have themselves been responsible for policy and it is very hard to find an academic economist anymore. They are all or almost all unanimously on my side, still, even after all the government practical kind of experience and there are business economists too and they line up pretty solidly on this side except the ones that happen to be related to the particular industry that may be included in this.

Now, really, to say there is no freedom of competition today simply because of wages won't wash. Mr. Strackbein talks about mining. The fact is that we are able to lay down coal in Germany where the wages are from one-eighth to one-tenth of our wages in the United States and sell it at a profit and compete very successfully with German coal and with Belgium coal. They are in all three countries, including Great Britain, getting to the point where oil is beginning to cut into this and that is why they are beginning to have difficulty on coal, but we produce coal so efficiently here that we can sell it in Europe with all the transportation and beat their costs there.

Mr. Strackbein seems to be questioning some of my figures. I said that the items that we have been dealing with have not changed much between 1959 and 1960. Well, here are a few typical ones. Military expenditures in 1959, they are $2.9 billion. They are $2.8 billion in 1960. United States economic aid grants were $1.8 billion in 1959. They are still $1.8 billion in 1960. U. S. private capital exports were $2.4 billion in 1959. They are only listed by Sylvia Porter who is a pretty good authority, I

think; if you read *Time* once in a while they say she is. I think her articles are pretty much tops. U. S. private capital $2.4 billion in 1959 and $1.6 billion in 1960 going abroad for investment.

Mr. Strackbein has picked up the figure of $4½ billion as the surplus of exports over imports. Miss Porter says this, and now these figures do include the items that he mentioned, military exports and subsidized agricultural exports. We are taking in from exports of goods—this is her article of January 16—from exports of goods and services $28 billion. We are paying for commercial exports of goods and services $20.5 billion and that leaves a surplus on our commercial account of $7½ billion, so you see I was conservative. I took out $3 billion worth of military shipments and of agricultural shipments and we still have in commercial imports and exports a surplus last year of at least $4 to $4½ billion and I am willing to stand on any of this, on the figures as they actually come out.

Let me go a little further with some of these figures. It is easy to understand why Canada is our biggest single market. How come? The whole theory that Mr. Strackbein has been expounding here is that if you put machinery in a foreign country you are going to lose your business. You are exporting unemployment. He didn't use that term but he has on other occasions. What happens when you industrialize a foreign country? They become a better customer. That is what happened in Canada. It happened with England. First England industrialized us and we became her best customer, then we industrialized Canada and they become our best customer. The same thing is happening in Europe. We ship them more sophisticated kinds of things. The business machine industry shipped typewriters and adding machines. After the war this went up like that and gradually went down. They began to shift to bookkeeping machinery and to electronic computers and that has gone right up like that and the total is substantially more and increasing. You have to shift the type of production if you are going to continue to sell to foreign countries where you have assisted in their industrialization.

I think, as a matter of fact, I would have to say that one of the somewhat backward industries, that is to say they were slow to develop until they got needled, was the textile machinery business. Bill Batt told me clear back in the period of the depression —Bill Batt was SAF—when the Japs were supposed to be nothing to worry about—a Jap walked into the office with the fastest bobbin, so fast no American machine can handle it. I have a clipping here that states the Japs are now sending textile machinery in here which certainly indicates we have to do something about keeping up with our own specialties and improving our own kind of stuff in the general spirit of the free competitive system. Not all industry is equally competitive.

Well, all right. Here are some which have found it possible to cut but only when they got pushed. Electric machinery. I already cited it. This is true of chemicals. The chemical industry has been the biggest supporter of protection. They have been in general for tariffs rather than quotas, although there have been some shift of this other protectionist organization to quotas. The chemical industry cut prices when they had to and not sooner.

Textiles. We can compete on the basis of total cost with anybody in the world on broadcloth which is our major high item in textile production. Mr. Cannon himself from North Carolina doesn't have to worry about anybody. He keeps up. He doesn't go backward, but you try to find sheets or towels and that kind of major backbone of the industry in this country that aren't made by him or somebody like him. They can compete and their own people have said so. They don't say so so much now because I began to quote it at them and they discovered they had better not do that. When they come down to Congress they've got to have their facts right. That's all we want.

Here is one thing you've got constantly. My friend Jack Potofsky and the Amalgamated Clothing Workers have started to go on the protectionist side. They have always been a little doubtful. Do you know what the actual import of suits has been with all this yelling? They have been less than one percent of the total production of suits in the United States and the real trouble with the clothing indusry and the textile production in this area has been that men have quit buying suits. I agree you buy them today. You don't put sports clothes on when you've got to go to business, but sports clothes have cut into the ordinary kind of suits that you and I are buying. I am doing it myself.

Wages. In the *Deutches Zeitung* on September 30 it states that the Federal Union of Employers Association in Germany has stated that wage increases this year will lead to an expansion of 11 and 12 billion Dutch marks in the country's purchasing power. They are putting the best light on it that they can. This estimate is based on the assumption of an average wage increase of 9 percent. The union points out—this is the employers' union—the union points out that at the latest wage negotiations wage increases of between 10 and 11 percent were being discussed.

I negotiate for the City of Cincinnati. I am on the Finance Committee and our increase is figured at 2.8 percent which is comparable with what is going on in the community. That is the basis of our wage policy. In view of the present economic situation and the position of the labor market, the union does not believe that an appeal to negotiating partners not to endanger price stability would have much effect.

Cost burdens, yes, but the AFL-CIO is doing something different besides appealing to the ILO and treaties. Treaties can accomplish something in foreign countries, more so than they can here, but in other things they have been conducting meetings in Europe telling union members how to organize and this is the beginning—this is beginning to have the effect, from the German quotation.

Competition to force you to improve methods. This can't happen. We have it already. How did we get compacts? We got it only by foreign imports and nothing else. That is a price factor and it has come in. What happened? The foreign compacts came in and the automobile manufacturers finally had to put out compacts and they cut the imports of foreign production. England is now going through a very serious situation in its automobile operation because they are laying people off because they can't send as many automobiles into the United States because of the domestic compacts. Just as simple as that.

How are we going to get it? By yelling at the automobile people? We never did. We never did. There is something of consumers involved in this thing. We are all consumers of one thing or another, raw materials or the things we wear. Electric machines you know about. Chemicals I mentioned but I'll give you one specific example. Phthalic-anhydride, whatever that is, is produced by Monsanto Chemical. It used to be produced at 66 cents a pound. They put in semi-automatic and then automatic plants and are selling it at 22 cents a pound. Who benefits by that? Why did they do it? They did it because of foreign competition, I assure you. Nothing else. It may be a competitive area but they haven't had to compete as much as they have to now and believe me, this is good for the economy. This is the thing that has made us great.

Well, I think I'll end up with Chuck Percy's piece, the article he had in THINK. That's the I.B.M. one, you know. For November. "American Industry did not become great by being sheltered. It achieved greatness because of the intelligence and pioneering spirit of the people. It became great through huge expenditures for research and development of new and imaginative ideas in manufacturing and merchandising. It is great because it firmly believes there is one way to succeed—to give the consumer the best possible product for the best

possible value. This and this alone will keep American industry vigorous and healthy in the years to come."

CHAIRMAN WARREN: Thank you, Mr. Taft.

Now, Mr. Strackbein will have his opportunity for rebuttal.

STRACKBEIN: I am always grateful to you, Charlie, for telling me when I made such and such statements that I never made (laughter). In 1945 I was engaged in somewhat different activities. As for quota bills I have been responsible, I think, for the introduction of one or two quota bills and not the whole ream that you suggested. The bill that I had would have been the daddy of them all, I'll admit (laughter), but it did not mention any products. Quotas as we look on them need not be absolute quotas. An absolute quota is where you say that so many tons or millions of tons or so many thousands of bushels can come in and that is all. There is a tariff quota which says that if you import 500,000 units of this and that the tariff will be so and so, perhaps a low tariff. Beyond that, the tariff will go up and restrict imports.

Now, I feel there should be a second dam because no one can foretell what the effects of a particular tariff rate will be. This goes to the very fact that the competition is not all on an equal basis. The competition that comes from Japan can override barriers that imports from England or Germany or France cannot surmount.

One reason for going to quotas or modified quotas or tariff quotas is precisely that fact. If you have a rate, let's say, of 25 percent on all imports, Japan may be able to pay that 25 percent and not feel it at all. On the other hand, because of higher costs in England and France and other countries, it might be quite restrictive. Now, then, if you try to raise this rate so it would fit Japan, say raise it to 50 or 75 or even 100 percent, because of the very low costs, then you would exclude the European countries. Therefore, because of the situation which arises by the principle under which you have the same tariff applying to all countries, the communist dominated countries excepted, you must have a more flexible instrument in order to meet a situation of that kind and to treat the various countries more or less on an equal basis so that more than anything else, has accounted for our support of the idea of import quotas and particularly tariff quotas.

Now, I want to dwell just a minute on this import of suits being less than one percent of those manufactured in this country. Mr. Potofsky, the president of the Amalgamated Clothing Workers, has taken extreme steps in his annual meeting with his union, and a resolution was introduced and passed saying that the members of the union will not work on imported suits from, I think it is principally Hong Kong, possibly also Japan. Now, that's what you call "self-help." They felt that they had to do this because the administrative remedies have been unavailable to them, or they have taken a look at the experience of others who have had resort to these administrative remedies and found that the administrative remedies were almost completely futile, contrary to the promises that had been given to the people of the United States by all the presidents since 1934 and also by all the Secretaries of State and other Cabinet members. They also had before them the experience of other industries. Today the imports might be only one percent of domestic production. Next year 5 percent. Next year 10 percent. The next year 20 percent, then 30, 40 and fifty percent. That has not been unusual in this country.

The only thing that in some of those instances has saved the domestic industry, and I don't have to go very far for an example of this kind, is the fact that domestic consumption at the same time happened to expand greatly and was able to absorb both domestic production and the imports. Not all items have that particular relief. Many of our items in this country have a very stable consumption. The item of sugar, for decades has run right at 99 or 100 pounds per capita per year. It matters not how much you advertise. The people just eat so much and that is all.

Now, there are some products where there is an indefinitely expandable market in this country. In those instances it is possible that the domestic industry can absorb an awful lot of import competition and still expand its own sales.

Now, that's why I say that in each instance the condition of each industry, the condition of the competition should be studied. No two industries are alike. No two competitive situations are alike and to reason that just because imports of suits are now only one percent, and that to have some fear about what might happen is ridiculous, I say such a stand itself is ridiculous.

For what purpose are we given foresight? What is foresight but one of the most rare accomplishments or one of the most rare gifts of managers and executives? It is their business to foresee and to forestall trouble.

Now, if it can be foreseen, and I think that it is perfectly obvious that if nothing were done to restrict these imports of men's suits that in a matter of time and not a very long period of time, instead of 100,000 coming in there would be 500,000, one million, two million, three million right up the line as long as the other manufacturing areas had the capacity.

Now, there again you will see that if that did happen it would be a subtraction from the American market because as Mr. Taft himself has just admitted, the wearing of suits is not expanding as let us say is the consumption of tuna. Not all industries are blessed with a possibility of having a constantly expanding market and so, therefore, in those instances I think action should be taken, account should be taken of the fact that when more and more of the American market is taken by imports, it is direct evidence that the competitive advantage lies on the other side, and it is probably a competitive advantage that cannot be overcome by the domestic industry unless by some good chance, some invention or some discovery comes along, and that is something that nobody can order to produce overnight.

There is only one more thing and that is about the increase in wages abroad. In Germany I understand they went up 10 percent and in Cincinnati only 2.8 percent. All I can say, Mr. Taft, is that you have been getting away with murder (laughter).

MEETING OF N.C.A. BOARD OF DIRECTORS

Norman Sorensen, Chairman of the Finance Committee, reported at the N.C.A. Board meeting, January 22, that the Association's income for 1960 was the largest in the history of the Association, exceeding the expenditures for the year by about $43,000, which amount was transferred to surplus. He reported also that the budgets of the various Divisions and activities for 1961 had been carefully reviewed and amended by the Budget Committee and that the Finance Committee, after some alterations, recommended to the Board that it approve these budgets as revised, totaling $1,567,500. Mr. Sorensen also reported that the Association has a prospect in 1961 of receiving from dues and other sources an income equal to the total amount of these budgets. Thus, the budget, as recommended, is in balance. The Board, after some discussion of the details of the recommended budget, voted its approval.

Since it was possible to construct a budget that is in balance with prospective income at the current rate of dues, the Finance Committee recommended that the rate of dues for 1961 be the same as the rate in effect for 1960—one-half of a cent per case for seasonal products and one-fourth of a cent per case for nonseasonal products, with the minimum of $75. This recommendation was likewise accepted by the Board.

The N.C.A. Protective Fund, amounting to $100,000, administered by three trustees, was reduced during 1960 to about $92,000. It was recommended, therefore, that $8,000 be transferred from the N.C.A. surplus to the Protective Fund to bring the latter back up to its par level, and this was done.

The Board approved the action of the Trustees in naming Milton E. Brooding as a trustee to fill the vacancy created by the recent death of Emil Rutz.

The N.C.A. chief executive officer is appointed by the Board of Directors. Only once before in Association history has the Board exercised that authority—in January, 1945, when Carlos Campbell was appointed Secretary to succeed the late Frank E. Gorrell. Under the N.C.A. Retirement Program employees must retire at age 65. Since because of that provision Mr. Campbell will be retiring during 1961, the Board of Directors acted to appoint a successor. A special committee was appointed by the President, early in 1960, to recommend a successor. John C. Hemingway, acting as Chairman of the Board, read a report of the special Presidents' Committee, which recommended the appointment of Milan D. Smith. After a brief discussion the Board voted to accept the committee's recommendation (see story on page 11).

A. Edward Brown, Chairman of the Administrative Council, brought before the Board the Council's recommendation that the title of the chief staff officer of the Association be changed to more adequately describe the duties and functions of this position. He stated that after considerable discussion it had been decided that Executive Vice President and Secretary would more nearly describe the actual duties of the office. It was moved and the motion carried that this recommendation be accepted.

R. B. Heiney, Assistant Secretary, reported to the Board on the progress of the Membership Campaign. Mr. Heiney reported that the campaign is now underway with promise of success.

A. C. Moll presented to the Board a recommendation of the Raw Products Committee, of which he is Chairman, that a more active program of education be inaugurated among those groups who are in a position to tell the story of the operation of the canning industry to farmers and the public. The Board indicated its approval of the recommendation and voted to accept the report.

John C. Hemingway gave the Board a report on the status of legislation affecting the canning industry.

Charles Gardiner, a Director from California, presented the Board with an invitation from the Mayor of Los Angeles to hold the 1963 Canners Convention in that city. After discussion of various possible Convention locations, the Board directed that the membership be polled to ascertain their preferences.

Mr. Brown reported for the special task committee appointed to review the Retirement Program of the Association. The task committee had reviewed the current plan and recommended changes that would bring it more nearly in line with retirement programs currently being used by many companies. Even though the recommended amendments to the plan provide for a more generous pension to employees with longer service, the estimated cost to the Association will be less.

The usual business resolutions and authorization of the appointment of special committees concluded the Board meeting.

At the luncheon meeting of the Board, together with invited guests from the allied industries, Mr. Campbell spoke on "Business Maturity," following an introduction by H. T. Austern, N.C.A. Chief Counsel.

Introduction of Carlos Campbell

By H. Thomas Austern,
Chief Counsel,
National Canners Association

Exactly 27 years ago, here in Chicago, the Association devoted its entire Annual Convention to meetings with Department of Agriculture officials—for the purpose of developing what were then called marketing agreements.

The sweeping Agricultural Adjustment Act had been passed in May of 1933. Pigs were being plowed under, and all canning crops were to be regulated in detail by these marketing agreements.

It was not only an agricultural New Frontier—but also, as many of you may remember, a New Deal.

A big team of government experts came out from Washington—administrators, economists, statisticians, and far too many lawyers.

But one fellow in that 1934 group of government agricultural experts was almost unique.

To begin with, he knew what he was talking about. He had studied agriculture on the farm. He had even operated a small and successful tomato canning business using the old hole-in-cap cans.

Indeed, he had been a typical canner because he had operated largely on borrowed money. In doing so, he had come to learn the value of a dollar.

His training and his experience had combined admirably to equip him for his job. While serving as an Associate Professor of Economics at the University of Arkansas, he had completed a doctor's dissertation on the "Economic Aspects of Cannery Management."

In 1929 he had come to Washington to the Bureau of Agricultural Economics. And when the AAA started, he was the only one available to bring some common sense and realistic experience into the control programs that were being evolved by that famous platoon of city-bred administrators and lawyers, who seemed bent on regimenting the entire canning indus-

try, either voluntarily or by coercive orders.

Every canner who encountered Carlos Campbell at the 1934 Convention was immediately attracted by his common sense, his fund of knowledge, and his technical skill as a trained economist whose feet were on the ground and not in the clouds.

Carlos was almost the first of that parade of sound men, which soon included Jim Dole, Chester Davis, and Wayne Taylor, whose philosophy did not fit the AAA because they did not believe that real growth could be achieved in a restricted, tightly controlled economy.

In May of 1934, the Association was therefore fortunate enough to enlist his as the first Director of its Statistical Division which he organized and gave initial momentum.

It soon won the confidence of all canners, produced invaluable trade information, and achieved a sturdy and enviable reputation with its reports confidently accepted by both the food trade and the government.

During the war years, Carlos Campbell demonstrated even broader capacities—and achieved greater stature—in solving the many problems of the canning industry that arose out of wartime production controls, priorities, rationing, and the economic squeeze of price controls.

In May, 1945, Carlos was called upon to manage the Association's affairs as Executive Secretary.

It is unnecessary for me to rehearse again the tributes to his leadership of the Association that were so happily expounded four years ago when he received the Forty-Niners Annual Service Award in recognition of his exceptional services to the canning industry.

As most of you know, sometime during the coming year, Carlos will, at his own election, relinquish active day-to-day management of the Association.

This afternoon, I understand, Carlos will endeavor to crystallize his basic concepts about the canning industry—and the problems it will encounter in the future.

That distillation of his years of study—of amassing facts—and of constantly fighting the battles of the industry on the firing line, will be provocative to everyone here.

Few of us will forget his basic philosophy, aptly expressed in 1957, when he said:

"The welfare of the consuming public is best assured by the preservation of that type of competition . . . that obtains when the only elements of inequality are in the businessman's talents."

I for one do not regard Carlos' talk today as comparable to Washington's Farewell to His Troops.

For all of us hope that Carlos' wisdom and experience will continue to be available to the Association and to the canning industry for many years to come.

I am happy that I have been given this privilege of introducing—in unnecessarily formal terms—a man whom all of you have been privileged to know intimately—to share as a friend—and to regard and respect as a leader.

Business Maturity

By Carlos Campbell

We now have a new Administration in Washington. Not just a different party, but a new crowd completely. The accent is on youth. This youth movement has advantages; it is vigorous, it wants action, it is impatient with the relatively slow pace of economic growth, it wants to move ahead, to "establish new frontiers." Such slogans catch fire. Consequently, we are now launched in the great experiment of action for action's sake. Actually there is no combination better than youth, with its vigorous action and new ideas, guided by the judgment of maturity. Maturity isn't just a product of age. It is the result of experimentation, trial and error, in which good judgment has retained the good and discarded the bad.

Another characteristic of this hurry-up crowd is the emphasis on government control, government direction of the nation's economy, government aid to everyone whose welfare happens at the moment to be below par.

All of this is a little confusing to businessmen who have been wrestling with these economic problems of fluctuating production and demand for their products for many years. In the process of figuring out solutions to these problems businessmen have matured in the economic sense. Mature thinking may come either from experiencing hard knocks or it may be acquired to a certain degree by an objective study of other businessmen's experiences. Actually a little of both is best. Progress in the economic sense results from the application of the appropriate rules of procedure since those rules are a product of experience and mature judgment.

There is a fundamental difference between the opinions of this modern school of economists and those who have acquired their knowledge from experience. Philosophers recognize two different methods for acquiring knowledge.

One is reasoning from known facts, a method employed by mathematicians and the physical scientists. Two plus two equals four. The square of the hypotenuse is equal to the sum of the squares of the other two sides of a right angle triangle. Thus, if you start with known facts and proceed with approved methods, you will always get the right answers.

The second method, which may be called experimentation, is useful when studying the relation of facts which are not always the same. Since economic data vary under different sets of circumstances, it is not possible to use the exact rules of mathematics. Experimentation coupled with mature judgment in selecting the most effective results is the only method for developing proper rules of procedure in the economic field.

Mixing these leads to trouble and confusion. Two good examples of this may be selected from the Kennedy program as it was enunciated during the campaign.

The first is the agricultural program based on the concept of managed supply. The reasoning that produced this economic panacea proceeds as follows: (1) Man requires food for his existence. (2) Rather than go hungry he will pay almost any price of which he is capable. (3) Consumers, for the most part, have sufficient income to enable them to pay the farmer a price that will be high enough to assure the farmer's parity income. Q.E.D., control the supply of food, releasing it to consumers at a rate that will maintain the price at the desired level. The simplicity of such a program is appealing to many who do not recognize its impracticality.

The second example can be taken from the "growth" program. Here again the reasoning starts with known and indisputable facts: (1) Consumption is limited by the amount that can be produced, or, in other words, the more we produce as a nation, the more goods and services we will have to use—to raise our standards of living and provide all of the other needs for our citizenry. Thus the problem becomes one of increasing production. (2) Production can be increased because there are productive facilities, labor, capital equipment, etc., currently not being used. Q.E.D., since private industry has failed in utilizing these productive facilities to their fullest extent, it follows that government should take over the planning and direction of their use.

Again this sounds like a simple formula, one that would give work to the unemployed, would reactivate steel producing capacity now standing idle, and would increase the gross national product which would make available more goods for our consumers to use. Of course, you can all see the fallacy in this reasoning. It can be stated very simply by saying that wealth is not created unless labor and capital are put to producing goods that consumers want and for which they are willing to pay money. Only if wealth is created could there be taxable prof-

its that would swell the coffers of government to be used on the many welfare programs which are the end requirement of this scheme of increased production.

Who is going to use the excess steel produced? One would think that we should have learned the lesson that came from stimulating production in agriculture and from producing surpluses for which we have no use; surpluses which did not provide more tax funds that could be used on welfare programs, but as everyone knows, they were surpluses, the maintenance cost of which drained rather than swelled the public treasury. I doubt if we can afford the extension of our agricultural program to the steel industry.

While we are on this subject I cannot resist the temptation to point out one other fallacy in comparing our rate of growth with that of Russia. In Russia there is no problem of overproduction, since the government takes all that is produced. Consequently, the rate of growth in production is limited only by the quantity of labor and capital that they can put to work. The concept of value which is basic in determining their G.N.P. is different from ours. If we were to utilize all of our productive facilities and have the government buy the surplus, at a price fixed by the government, we could also increase our G.N.P. but it would not do us any good unless the government could figure out some way of using the surplus steel and any other surpluses that might develop under this program. How, for example, could such a program provide the support for the welfare programs? Federal aid to education, for example, could, I suppose, be achieved by distributing the steel surplus among the teachers to augment their pay. Or, better still, we might have the government require consumers to eat nothing but canned food so as to expand the use of steel and create taxable value, which, after the usual discount for handling through the Treasury, would provide funds for increasing teachers' salaries.

There is no doubt but that given an adequate stimulus businessmen will use available productive facilities or create new ones if sufficient are not available. The important thing is that the stimulus for production should come from consumers' demand for the product, and not from government.

The experimentation method with mature judgment has demonstrated its effectiveness in the world of business. Nearly two centuries ago Adam Smith, observing the experiments that businessmen were conducting at the advent of the industrial revolution, made some very profound observations which have served as guides for increasing the wealth of nations. Smith noted that businessmen in their quest to satisfy their wants had achieved an effective plan for using labor. This plan increased the productivity of labor many fold, principally through the use of capital and specialized training of workers. This more efficient method created goods in excess of the needs of those who were producing them. The surpluses were traded or bought and sold, and thus more and more needs of more and more people were satisfied. Smith described it as "the greatest good for the greatest number." He explained that competition among producers would tend to insure that consumers would reap the fruits of these productive processes, provided the individual businessman was free to exercise his own judgment in using his productive facilities and in disposing of the goods thus produced.

Some of Smith's followers got the erroneous impression that he was advocating complete freedom from either church or government restrictions. This accounts for the capitalistic system sometimes being mislabeled "laissez faire." Thus the criticism that is frequently directed toward the capitalistic system is, in fact, a criticism of the laissez faire doctrine. Some members of the modern school, for example, contend that conditions have changed so radically that competition is no longer an adequate assurance that consumers will be protected against the exploitation of businessmen. Consequently, they say, the government must step in and fill this void. Thus there is good reason to expect a revival of the demand for consumer protection. This sort of thing seems to come in cycles or waves. It was particularly noticeable throughout the 1930's when the New Deal came into power. We are about due for a revival of this type of thinking.

I know that many of you will recall the Consumer Council set up in the New Deal days, presumably to protect the consumers, but in fact operated to harass businessmen. Some of those activities were reflected in proposed legislation. A number of bills were introduced in Congress in the '30s to require the industry to limit the use of can sizes as a means of protecting the housewife against the alleged fraud and deception practiced by the canning industry.

These government-sponsored councils fanned the flame of prejudice against business. Consumers were led to believe that only the government could shield them from exploitation by businessmen. Compusory grade labeling of canned foods was, during that period, the subject of many forms of proposed legislation, and is likely to be again unless the canning industry is able to counteract this kind of malicious propaganda.

There is no denying the fact that the effectiveness of our economic system is measured by the extent to which it improves the welfare of the consuming public. The difference of opinion arises in connection with how this is to be accomplished. It is my contention that an industry that has honestly tried to achieve this objective will have followed the basic precepts of economic theory, making the necessary adjustments as the change in conditions warranted. Such an industry can be said to have developed mature judgment in these matters. Such an industry can and will make its greatest contribution to the welfare of the nation if allowed to follow those rules of operation which its mature judgment dictates. Any attempt to impress on that industry new and untried ways of operation penalizes not only those businessmen in the industry itself, but reduces that industry's contribution to the national economy.

The canning industry is the best example of an industry that has been forced to meet changing conditions in order to survive. The problems with which the current Administration is wrestling were problems that confronted the canning industry 50 years ago, problems the solution of which the industry has developed, raising the income of the farmers who grow the raw product and contributing to the improvement of the consumer's welfare.

At this point a statement of some of those things the industry stands for might be in order. The welfare of the individual is the chief objective of our democratic society. Much is being said these days regarding the necessity for protecting the individual's freedom in order that he may not become a mere cog in the state-controlled economic machine. It is one thing to advocate an ideal but quite another thing to put it into operation. The canning industry stands for the preservation of the individual's economic freedom. It supports those who try to protect the right of the individual to make his own free choices and to reap the resultant rewards or to suffer the resultant penalties.

During the past 30 years our national economy has suffered extremely bad years and has enjoyed years of exceptional prosperity. Certain segments of the great agricultural industry of which the canning industry is a part, sought and obtained assistance from the federal government to ease the strain of the depression. Having tasted of this Garden of Eden apple, they became addicts, with an attendant loss of freedom. The canning industry was subjected to the same temptation but resisted, and thus reserved to a considerable extent the economic freedom of its individual members.

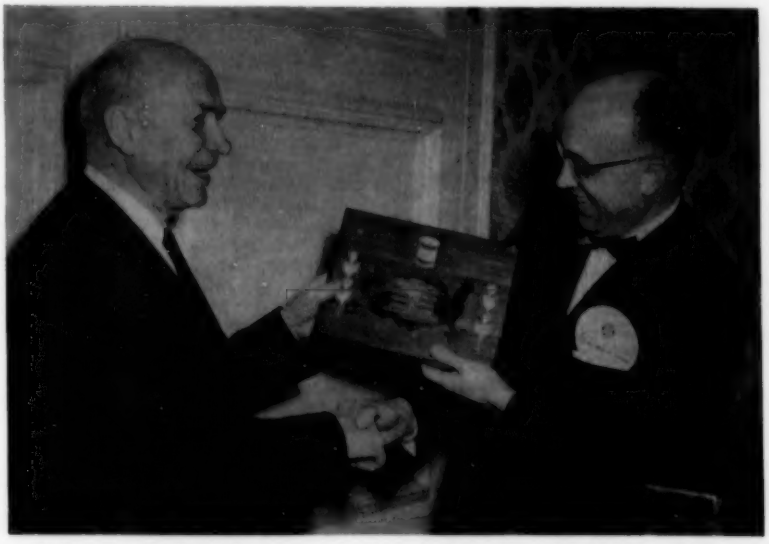
If progress is to be measured by increased productivity, as we are now being told, then it might be appropriate to consider the case of the canning industry. During the past ten years productivity in the canning industry has increased at the rate of about 5 percent annually, while the total private economy of the nation was increasing at an annual rate of only 3.5 percent. I would like to point out here, for the benefit of those

who worship the god of increased productivity, that the canning industry considers it only as the means to an end and not an end in itself. Equitable distribution of the benefits of this increased operating efficiency is the objective. The canning industry supports the thesis that these benefits cannot be equitably distributed by a government agency that dictates to the industry. Such equity can more nearly be achieved as a result of the competition which obtains when individual men are free to make their own choice, reap the rewards of their own management, and suffer the losses when that judgment is not good. The canning industry has supported the view that under such a system there will be steadily increasing dividends to be distributed among consumers. The American public owes much to industry's support of this policy for its increasing standards of living.

In this connection it might be interesting to review the record of how the canning industry has shared its increased productivity. A great deal has been written in support of labor's claim to a substantial share of the benefits of increased productivity. Those who supply the capital have a legitimate claim to a fair share of these benefits. Certainly management, that indispensable catalyzer in creating this increased efficient use of labor and capital, deserves consideration. The canning industry does not presume to champion the cause of any one of these, being content to rely on the competitive forces that operate in this industry to achieve an equitable distribution among these claimants.

The consumer participates in the benefits of increased productivity not as a claimant but as the beneficiary of the economic system. Benefits have been passed on to the consumer of canned foods in the form of increased quality, greater convenience of the finished product, as well as in the form of retail canned food prices that have not increased as rapidly as the prices of other foods. Retail prices of canned fruits and vegetables are now only 13 percent higher than they were during the base period years of 1947-49. Prices of other foods which reflect to some degree the high level farm support programs are much higher. The story of the welfare of the individual, however, is not measured by this comparison. He must consider how much of his own labor is required in exchange for a given amount of canned foods. The average industrial worker can buy, with one week's take-home pay, at the corner grocery or supermarket, 52 percent more canned fruits and vegetables at today's prices than he could have purchased with one week's take-home pay, during the 1947-49 period, at prices that prevailed then.

The canning industry's interest in improving the welfare of the consumer is not a do-good policy, but is rather an expression of an enlightened self-interest. It is, in fact, the measure of confidence the industry has in its belief that the individual canner's selfish interests will be best served by his constantly striving to satisfy the consumer.



Carlos Campbell received a special tribute from the Association of Canners State and Regional Secretaries—the executive secretaries and executive vice presidents of the state, regional and commodity canners associations. Dr. Wilbur A. Gould of the Ohio association, who as president of the ACSRS presented the plaque, said that "the can symbolizes the great industry you have so ably served and the map represents to us the interest you have shown and the leadership you have displayed to the industry."

—photo courtesy of *Canner/Packer*

Not all men in the canning industry have sufficient faith in this policy to support it under all conditions. Realizing that a few opportunists who lack such faith can severely damage the reputation of canned foods, leaders of the canning industry more than half a century ago supported legislation designed to insure the protection of the consumer from the short-sighted policies of those few who would by their actions tend to negate the policies of the majority of canners. The industry continues to support the principle upon which the Food and Drug Administration was originally created but resists efforts to extend the authority of this government regulatory body into economic controls.

The fact of this accomplishment does not, however, provide the assurance that the canning industry will be exempt from government's attempts at regulation. The industry must continue to educate those who have not had an opportunity to observe and analyze its performance. This includes consumers in large part, but it also includes farmers who have failed to understand benefits that have accrued to them through the canning industry's development of the contract system of marketing. When telling the story, claims must be conservative; all facts must be well documented. Be tolerant of those who, having been fed on prejudice, will not believe. They will need a second treatment, or possibly more, if they have been long exposed to anti-business propaganda.

There will be those also who find it difficult to reconcile the fact that businessmen, efficient hard-boiled operators, frequently driving hard bargains, can also be so concerned with their consumers' interest and the public welfare. In that connection it is well to remember the inscription on the tablet in front of the National Canners Association's headquarters in Washington, and its Laboratory in Berkeley, California, which reads in part as follows: "As this symbol is an index to stature so shall its purpose be a service to national welfare." The canning industry's liberal support of its national trade association—the wonderful buildings and other equipment provided for the N.C.A. staff—is an index to the stature of that industry, a stature which measures the maturity of an industry in dedicating the use of its facilities to service of the national welfare. Are these the words of tough, exacting, proficient businessmen, who are accused by members of the new order of exploiting the consumer to serve their own selfish interests? Those words express clearly the true objective of an industry that has had to fight hard to maintain its independence and freedom of action.

Report of the Raw Products Committee

By A. C. Moll, Chairman

The Raw Products Committee, in its meeting in May in Washington, recognized potentially increased pressure for marketing order type legislation and greatly increased grower bargaining association activity. This trend is predicated on the development of contract production of various agricultural commodities other than processing crops, as currently seen in the production of poultry, meat, and other various farm crops. The consequence of this will be that canners with their contract production of crops will no longer be unique, nor will the contract production of farm crops be a minor factor in agriculture which would justify its exclusion from national farm policy consideration.

The Committee resolved that N.C.A. should initiate a continuing educational public relations program in the agricultural community to carry the canner's story to those who influence economic and political activity in farm legislation. This program must be based on facts as developed by N.C.A. from all available sources, and must be carried on with professional caliber. The program must be aimed at the groups to be reached, which are likely to be segments of agriculture other than canning crops growers.

The Committee is not proposing a canner-grower relations program, as this matter is one of the business relationship between the canner and the grower and apart from the proposed activity.

The groups to be reached include, but are not limited to, the following:

1. Agricultural economists in the public employ.
2. The agricultural press.
3. Farm organizations and cooperatives.
4. The agricultural Extension Service and county agricultural agents.
5. Federal and state regulatory officials.
6. Service Clubs in the agricultural communities.

The canning industry, in its pattern of contract production, has many favorable positions from which to initiate its efforts. One of these is the stability of grower prices in contract production. A second is in the concept of the growth of the market through increased consumption of its products as the result of favorable quality and price considerations at the market place. A third is in the production efficiency of the industry as a marketing route for the farmers' products, as enhanced by the services provided by canners to growers in terms of research, field supervision, and mechanized operations of harvesting and handling.

The Committee recognizes a specific area of initial and urgent activity in this proposed program. This is to reach the State University and Experiment Station agricultural economists who are advisors to farm organizations. This function is a part of their public duty and therefore entirely proper. Currently agricultural economists are very much interested in contract farming as a method of agricultural production, and many economic reports are being written on this subject. Because of its concern with the content of these reports, the Committee has asked that appropriate N.C.A. staff members review and evaluate the reports for its members.

The Committee visualizes an approach to the economists similar to that of the Raw Products Research Bureau in the crops area. The economists must be met on a professional level and the Association may or may not have entirely appropriate personnel for this work.

Assuming approval of this activity by the Board of Directors, the Committee recognizes that the initiation of this program may involve additional expenditures by the Association, depending upon personnel available and the integration of the program into the general activity of the Association. The Raw Products Committee urgently requests approval of the proposed program and prompt undertaking of an effective public relations effort in the agricultural community as outlined.

Report of the Legislative Committee

By John C. Hemingway, Chairman

The Legislative Committee and the staff expect to have their hands full during the months ahead keeping informed of developments in the program of the new Administration as the program takes form. It is likely that your Committee and the staff also will have its hands full making the views of the industry known to the new government department and agency heads as well as to Congress.

Our policy is to hoe our own row and thus you might think that the job of watching out for the interests of the canning industry is not difficult. But one of the major tasks is finding the row to be hoed. To point this up let me remind you that Senator Kennedy, the candidate for President, made many campaign promises. According to *Congressional Quarterly*, he announced 220 "musts," priorities, and pledges. The canning industry row is very apparent in some of these, particularly the priority for wage and hour law amendment. But when bills to implement the 220 subjects are introduced they must be studied for possible effects on our industry.

As is the case with amendments to the wage and hour law, some of the subjects that will be considered by Congress are not new. The job of the industry in these instances will be to reemphasize and state again our position. Justifying the necessity for seasonal exemptions in the wage and hour law may be our toughest job. This was done effectively last year; it will have to be done again this year —and soon.

Among the old subjects that have been reintroduced, and that will require our attention are proposals to change the good faith defense in meeting a charge of price discrimination, bills to provide for the issuance of temporary cease and desist orders, advance price-increase notification measures, premerger notification, bills dealing with the doctrine of federal preemption, the removal of the canning exemptions from overtime, and a series of measures dealing with migrant agricultural labor.

Another old proposal that undoubtedly will cause us difficulty is the continuing effort to make all canning crops subject to federal marketing order controls.

But there will be new problems. President Kennedy stated that he would name a consumer counsel in the Office of the President to represent the interests of the American consumer in all the activities of government. Senator Kefauver plans to reintroduce legislation to establish a Consumers Department in the government. Apparently, the "consumer" is going to receive attention and although the "consumer" is our friend and our market, when the "consumer's interests" become the subject of special government attention, past history warns us to prepare to educate another generation on the fallacy of mandatory grade labeling, mandatory container standardization, mandatory this and mandatory that. The Legislative Committee is glad that the N.C.A. Labeling Program is being reactivated. Taking the initiative is the best defense.

Another subject that I will list as new, even though it was introduced last Congress, is a proposal to enlarge and extend the factory inspection authority of the Food and Drug Administration. Senator Kefauver spanked this subject by introducing a bill that would have applied only to drugs. The Food and Drug Administration took the opportunity thus offered to

propose that broadened factory inspection powers be given them over foods as well as drugs. The Chairman of the Senate and House Committees then introduced appropriate bills. Recommended drafts of these bills have been forwarded by the HEW Department to the Congress and will probably be introduced this coming week. In the meantime Congresswoman Sullivan of Missouri, who has been very active in food and drug and "consumer" matters, has introduced a bill to make many changes in the food and drug law and to "strengthen" factory inspection authority.

While on the subject of the Food and Drug Administration, your attention is directed to the increase in funds that the agency has requested. Their request, as transmitted in the Eisenhower budget, is for a 20.6 percent increase in funds representing a 13.7 percent increase in personnel over the current fiscal year or a total authorized force of 2,500 of which 685 would be inspectors. In 1954 FDA's actual expenditures were $6,243,374. The proposed total for 1962 is $25,462,000—about four times as much. The inspection force in 1954 was 202.

Congress is now beginning to go to work on legislation, having worked out most of the organizational problems. The Association staff hopes to get out from under the flood of bills that mark the opening days of a new Congress. About 4,000 have been introduced.

At our meeting this morning we tentatively agreed to have a meeting of the Legislative Committee at N.C.A. headquarters on March 15 and 16. By that time we expect to be able to form a judgment as to the subjects that will require our attention between then and your next meeting. In the meantime you will be kept informed through the INFORMATION LETTER and by special bulletins of Congressional proposals requiring your action.

Report on the Membership Campaign

By R. B. Heiney,
Assistant Secretary,
National Canners Association

At your last meeting you gave approval to a proposal for a continuing membership campaign. That action established the Board as a membership committee with the Board members from the state and geographic areas acting as subcommittees. The staff was directed to act as a coordinating factor and to prepare material for use in soliciting members.

It had been our hope last May that we would be able to get the staff work underway promptly. Congress, however, did not cooperate. It stayed in session, recessed for some Convention activities, and came back into session and thus claimed time that we had optimistically planned for membership work. Finally, however, we were able to turn attention to this vitally important membership work.

We then went to work on the job of making tools for use in selling membership:

(1) Mr. Campbell wrote you a letter that was put into pamphlet form on *Why Should A Canner Belong To The N.C.A.?* In this he effectively answered the charge that N.C.A. is run by and for the big canners and he answered the objection voiced by some that N.C.A. costs too much.

(2) The pamphlet *For Those Who Can*, which briefly describes the Association's services, was brought up-to-date. This pamphlet was about ten years old and needed to be reworked —not much—for we found it to be a very fine basic presentation. But since it was first prepared the Research Laboratories and the Raw Products Research Bureau have met the challenges of chemicals and food additives and the Protective Screen program was put into operation. The consumer relations work has been broadened and given identity through the change in the name of the Home Economics Division to the Consumer Service Division and the addition of the Consumer and Trade Relations Program.

(3) An entirely new membership presentation was created, *The Sense of Belonging to N.C.A.* This publication was designed for use when making personal calls on prospective members. It was prepared to give anyone making a membership solicitation something to talk from, and through the series of questions *How Do You Vote?* to bring out the values of N.C.A. membership.

These publications, along with the booklet that tells about the Claims service, the By-Laws, application blanks, and lists of non-members, were sent out to most of you. President Smith in his covering letter expressed the hope that you would be able to report progress today in the goal of 100 percent membership.

Omitted from the initial mailing were the fish canner members of the Board, the meat canner representative, and the Hawaii and Florida Board members. The explanation is that Mr. Campbell has a special program under way that is well known to the Florida industry. Our Hawaii membership is 100 percent in pineapple and although there are some other canners in Hawaii, we are not ready at the present time to go after them. Likewise, we have not completed plans for a program to bring more meat canners into N.C.A.

There is a sizable number of nonmembers in states where N.C.A. has no Board representation. These canners are receiving a direct letter of solicitation over Mr. Campbell's signature and follow-ups will be planned by using staff members when they are on field trips and by asking neighboring canners who are N.C.A. members to help out.

That gives you a brief report of the campaign phase of the membership work. The combination of your action last May in centering attention on the need for increased membership and President Smith's letter in December has produced results. Thus, although as an organized campaign we are just getting started, we are able to announce progress. A number of you have written President Smith reports on your work. We received a very fine report from the Northwest this morning. If any of you have further reports, President Smith will entertain them now.

Canned Foods for Survival Exhibited and Demonstrated as Feature of Convention

A "Canned Food for Survival" exhibit was officially opened Saturday afternoon, January 21, in the Lower Lobby of the Conrad Hilton Hotel before press, radio and TV representatives, by Maj. Gen. John L. Homer, U.S. Army (Ret.), Illinois' newly appointed State Civil Defense Director, and N.C.A. President Milan D. Smith.

The exhibit was highlighted with special daily events for five days, including appearances there of Mrs. America of 1961, President-elect John C. Hemingway, and canning industry home economists.

Occupying some 500 square feet, the exhibit featured a specially equipped and erected fallout shelter provided by the Office of Civil and Defense Mobilization at Battle Creek, Mich. On each of the five days a different young married couple from Chicago lived in the shelter and demonstrated shelter livability and appropriate utilization of survival supplies. They prepared a daily luncheon, following a menu worked out from OCDM's recommendations by Jo Ann Schurpit, home economist for Libby, McNeill & Libby. To compensate for helping with the exhibit, members of the Consumer and Trade Relations, Consumer Service Committees and a few other N.C.A. members are supplying the needy of St. Carthage Parish, Chicago, with donations of canned foods totaling 100 cases. In addition to the Shelter, the exhibit featured a shelf display of OCDM-recommended foods, generically labeled, for 14-day survival of two adults and one infant.

Details of planning for the exhibit, organizing the material and manpower for it, were a joint effort with N.C.A. of city, state and federal civil defense officers, the Conrad Hilton staff, and representatives of the Portland Cement Association which supplied a continuous civil defense film. Libby supplied the food actually consumed by the volunteer occupants.

General Homer, in his opening remarks, stressed that the canning industry's role in civil defense and other emergencies is important, inasmuch as canned foods represent about 85 percent of the food supplies recommended to householders for emergency use in either shelters or mobile units for evacuation. The suitability of canned foods had been demonstrated, he said, when they were exposed to an atomic explosion in 1955 at the Nevada Test Site and found by Food and Drug officials to survive blast damage, no impairment of food values and freedom from radioactivity.

Mr. Smith stated that the canning industry has traditionally played a major role in disaster relief and other worthy public causes. He stressed the importance of every citizen not only assembling emergency supplies, but also practicing shelter food preparation periodically as part of preparedness, and rotating their stocks by replacement of the food thus consumed, so as to always be equipped with the necessary quantity. He termed the exhibit "another evidence that industry and government can team up in programs that are of mutual benefit and that constitute a genuine public service."

Publicity for the exhibit was handled by the N.C.A. Information Division and was featured in several of the Chicago daily newspapers. It also was telecast twice by Chicago's Radio-TV regional Station WGN, and by NBC's Chicago regional TV station.

Below, speaking at the opening day ceremonies are General Homer and Mr. Smith. Shown in the shelter are Father Devaney, Assistant Pastor of St. Carthage Church, Chicago, who recruited volunteer young married couples to occupy the shelter daily and cook meals from the canned foods supply, with the first couple, Mr. and Mrs. Edward Johnson.

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